GEYSER

water filters

CATALOG

INDUSTRIAL EQUIPMENT

filters and water purification systems

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filters and water purification systems

2023

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GEYSER
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First Production Year: 1986 Head Office:

St. Petersburg

Representative offices: Moscow, Rostov-on-Don, Krasnodar, Krasnoyarsk, Novosibirsk, Ufa, Saratov, Yekaterinburg, Riga, Belgrade, Bucharest, Almaty, Tashkent

Production is located in the Russian Federation (St. Petersburg)

Geyser distribution network covers all regions and major cities of the Russian Federation (over 120 cities)

The company has more than 1,000 employees

Geyser released its first filter in 1986 and within a few years had become the market leader in household filters for water purification. A research and production holding has grown on the basis of the company, which includes a research department with an analytical laboratory, a design bureau, and a modern thermoplastics and thermosetting plastics production facility. Discoveries and inventions of the company are confirmed by more than thirty patents of the Russian Federation and recognized by twenty-eight foreign countries. High quality of offered products, strict fulfillment of warranty obligations, flexible payment system and mobility of supply, consulting support, high integrity and impeccable reputation attract new partners to the company.

The market for private and collective housing is currently booming, public utilities are growing, and industrial production is developing and modernizing. Today, water treatment is an integral part of the utility system of any house. The well-being of a huge number of people depends on the quality of municipal water supply; treated water is a participant in most modern technological processes. Due to the growing volume of consumption, clean water is becoming a strategic raw material, and the problem of scarcity is becoming more and more acute. With such a wealth of experience, a strong scientific and production base and infrastructure, we are actively involved in its solution.

The catalog will introduce you to water treatment equipment for municipal and industrial areas, private housing. Country house water supply, poorly covered by the process of water treatment due to the seemingly high cost of solution to the problem of obtaining clean water in the countryside, is also included. Here, too, we offer a range of simple, functional and affordable solutions for this problem as well.

The range includes time-tested and brand new, mostly exclusive to the Russian market, materials and components. The catalog contains products both of our own design and manufacture and those of our foreign partners, many of them are the result of joint research and industrial cooperation.

ELEMENTS OF WATER TREATMENT SCHEME

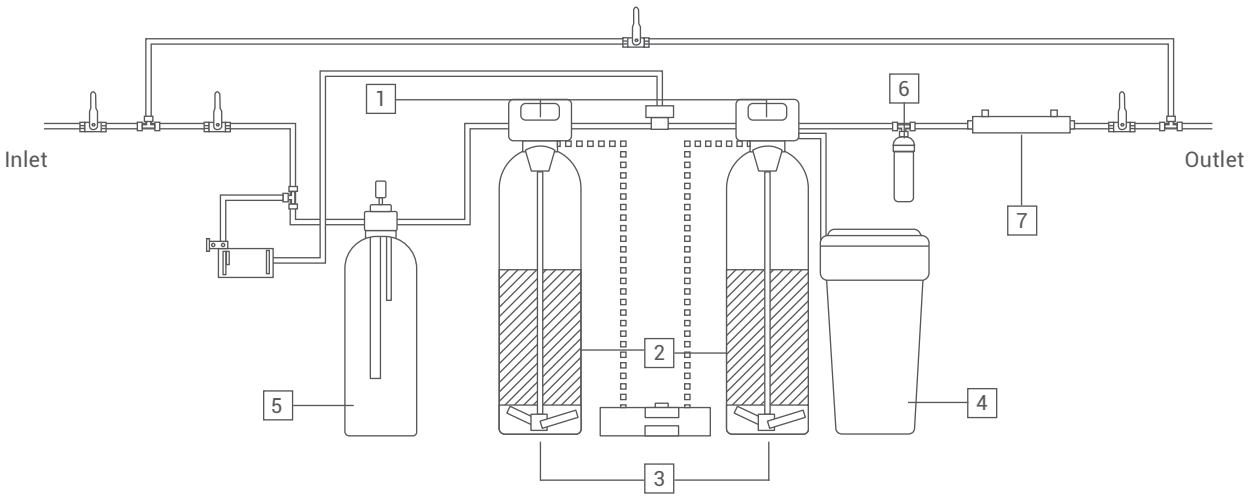
Grain filters consist of the following basic elements: filter housing, control unit, drainage and distribution system, gravel substrate, filter media.

The filter housing is made of fiberglass and is a hollow cylinder with a dome-shaped top and bottom. The bottom part of the housing is placed in a special ring base for stability. In the top of the housing is a neck, through which the assembly and filling of the filter is carried out. In larger housings, a similar neck is also made at the bottom to facilitate the unloading and maintenance of the filter.

The control unit is a multi-way valve with an electromechanical actuator and the necessary automation (manual mode switching is possible). The purpose of the control unit is to switch the water flow, to ensure timely flushing (regeneration). Control units are available that allow you to rinse the load at a user-set time and day of the week, as well as by measuring the volume of water that has passed through the filter. Depending on the type of load used, control units are used that allow it to be flushed only with a reverse flow of water or (optionally) with chemical reagents (NaCl, KMnO4) stored in a special tank next to the filter.

The filter drainage and distribution system consists of a water-lifting pipe, a bottom distributor (collects the flow of water going through the load in the operating mode, or evenly distributes the flow in the body during washing), an upper slotted filter (prevents the load from being carried away). The bottom distributor, as a rule, is closed with a gravel substrate, so that it does not clog with the load, and the distribution of water flow was carried out over the entire cross-sectional area of the filter.

The filter load is the main part of the filter. It determines what tasks the filter will solve. In addition, the volume of the used load, which is calculated for each size of filter, is of great importance, taking into account the required capacity, the speed of water passing through the filter in different modes, the minimum height of the layer of the load, the required free volume for its expansion during washing, etc.



1 Filter and softener control units

2 Filter housings

3 Filter media

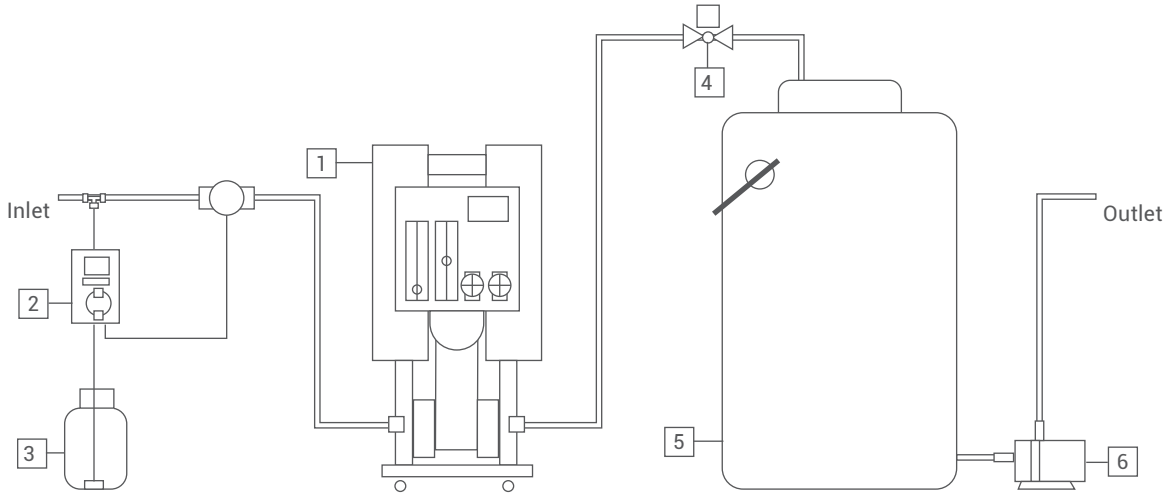
4 Tank for regeneration solutions

5 Aeration system

6 Mechanical filter with replacement element

7 Water disinfection unit

REVERSE OSMOSIS UNITS



1	Reverse osmosis units	3	Reagents for water treatment	5	Polyethylene tanks for water supply systems
2	Metering equipment	4	Solenoid valves	6	Pumping equipment

Systems incorporating reverse osmosis membrane elements are designed primarily to produce desalinated water. The reverse osmosis process is based on pressurizing water through a semi-permeable membrane. This separates the feed water into two streams: permeate (desalinated water) and concentrate (concentrated solution of impurities).

The proportion of permeate varies depending on unit capacity, feed water composition, type of roll membrane elements used, and several other parameters. Compared to classical desalination methods, reverse osmosis units require somewhat higher capital investments, but the operating costs are considerably lower.

For industrial systems, as a rule, operating costs are of primary importance, and given that there is no need for neutralization or purification of effluents, the maintenance of special storage and reagent facilities, reverse osmosis unit is the most cost-effective method of desalination, in most cases.

Reverse osmosis units are used in many industries where there is a need to obtain high quality water: heat power, electronics, food industry, chemical industry, pharmaceutical industry, etc., as well as in the drinking water supply.

REVERSE OSMOSIS UNITS WITH A CAPACITY FROM 3.0 TO 20 M³/HOUR

Constructive features of the units:

- Stainless steel frame
- GRP membrane housings
- Vontron ULP21-8040 highly selective (95-99%) reverse osmosis membranes (8"x40")
- Multistage vertical stainless steel high-pressure pump
- Concentrate recirculation line (to reduce feed water consumption)
- Hydraulic flushing line (flushing sediment from the membranes with increased water flow) with the possibility of switching off
- Pump dry-run protection system
- High pressure switch
- Logic controller for setting the operating modes of the unit
- Soft-starter for the pump (to protect the system from hydraulic shock and reduce the load on the power grid)
- Phase control relay (protection against line voltage fluctuations, phase loss, incorrect phase sequence)
- Pressure gauges at the inlet to the unit and on each membrane block
- 3 rotameters (on filtrate, concentrate and recirculation line)
- Control valves
- Possibility to connect a chemical membrane washing unit
- Connectors for water level float sensors
- Solenoid valve at the inlet to the unit
- Filling the membrane housings with filtrate during stops (optional)

Additional options:

- Two-channel conductometer for monitoring the salt content of feed water and filtrate
- Membrane chemical washing unit

Specification

Parameters	R03–8040	R04-8040	R05-8040	RO6–8040	RO8–8040	RO9–8040
Number of membranes	3	4	5	6	8	9
Capacity*, l/hour	3000	4000	5000	6000	8000	9000
Operating pressure, bar	8–12					
Unit dimensions, height x depth x width, mm	1700x800 x3700	1700x800 x2700	1700x800 x3700	1600x800 x2700	1700x800 x2700	1700x800 x3700
Power, kW	5.5	5.5	5.5	7.5		11
Supply voltage, V	380					
Item	20339	20309	20351	20317	20321	20316
Unit weight, kg	approx 400	approx 500	approx 350	approx 600	approx 800	approx 700
Feed water consumption in filtration mode, m³/hour	min. 6,0	min. 6,0	min. 7,5	8,0-10,0	min. 12,0	12,0 - 15,0

Parameters	RO10–8040	R012-8040	R015-8040	R018-8040	R020-8040
Number of membranes	10	12	15	18	20
Capacity*, l/hour	10000	12000	15000	18000	20000
Operating pressure, bar	8–12				
Unit dimensions, height x depth x width, mm	1700x800 x2700	1700x950 x3800	1900x950x3800	2100x950x3800	2000x950x4800
Power, kW	11	11	15	15	18,5
Supply voltage, V	380				
Item	20322	20323	20348	20352	20350
Unit weight, kg	approx. 700	approx. 1050	approx. 770	approx. 950	approx. 1100
Feed water consumption in filtration mode, m³/hour	13,0 - 16,0	min. 16,0	20,0 - 25,0	25,0 - 30,0	25,0 - 30,0

* The system capacity and feed water consumption depends on the temperature and salt content of the feed water. As the temperature decreases, the capacity decreases. Depends on the parameters of the feed water.

REVERSE OSMOSIS UNITS WITH A CAPACITY FROM 0.25 TO 3.0 M³/HOUR

Unit features:

- Stainless steel frame and membrane housings
- Vontron ULP–21 4040 highly selective reverse osmosis membranes (4"x40")
- Mechanical filter with a 5 µm sieve threshold at the inlet to the unit
- Multistage vertical high-pressure pump
- Low pressure switch to protect the pump against dry-run
- Pressure gauges
- Rotameters on filtrate, concentrate and recirculation lines
- Concentrate recirculation line to reduce feed water consumption
- Control valves
- Solenoid valve at the inlet to the unit (water supply to the unit is stopped by a signal from an external sensor)
- Control of the unit by means of a Mitsubishi logic controller (programming the frequency and duration of the hydraulic flushes, starting the unit at a set time, etc.)
- Connectors for water level float sensors
- Possibility to connect a chemical washing unit

Specification

Parameters	R06-4040	RO8–4040	RO12–4040
Number of membranes	2x3	2x4	2x6
Capacity*, l/hour	1500	2000	3000
Operating pressure, bar	8–12		
Unit dimensions, height x depth x width, mm	1250 x 600 x 2400	1515 x 745 x 2800	1515 x 745 x 2800
Power, kW	2.2	4.0	5.5
Supply voltage, V	380		
Item	20326	20320	20324
Unit weight, kg	approx. 140 kg	approx. 160 kg	approx. 250 kg
Feed water consumption in filtration mode, m³/hour	2,7 - 3,5	min. 3,0	min. 5,0

* The system capacity and feed water consumption depends on the temperature and salt content of the feed water. As the temperature decreases, the capacity decreases.

Specification

Model	Item	Number and type of membranes	Power, kW	Hydro flushing	Filling with filtrate	Controller	Inlet mechanical filter	Ports for chemical flushing
RO1.C.4040	20349	1x4040	0,75		optional			
RO1.L.4040	20340	1x4040	1,1		optional			
RO1.LW.4040	20341	1x4040	1,1	+	optional			
RO1.4040	20332	1x4040	1,1	+	+	+	+	
RO2.LW.4040	20343	2x4040	1,1	+	optional			
RO2.4040	20331	2x4040	1,1	+	+	+	+	
RO3.4040	20334	3x4040	2,2	+	+	+	+	+
RO4.4040	20333	4x4040	2,2	+	+	+	+	+

Unit features:

Standard configurations (L and LW):

- stainless steel frame;
- solenoid valve at the inlet to the unit;
- dry-run sensor;
- pressure gauges (feed water pressure and operating pressure at the membranes);
- rotameters (permeate, concentrate and recirculation lines);
- multistage stainless steel pump;
- pressure housings for stainless steel membranes;
- sensor for shutting down the system by the upper level in the storage tank;
- hydraulic flushing line for membranes (LW version);
- set of pipelines and shut-off and control valves

Horizontal units (from 1.5 to 15 m³/hour):

- stainless steel frame;
- solenoid valve at the inlet to the unit;
- dry-run sensor;
- pump high pressure sensor;
- pressure gauges (feed water pressure and operating pressure at the membrane);
- rotameters (permeate, concentrate and recirculation lines);
- multistage stainless steel pump;
- soft-start system for the pump;

Complete sets (0.25 to 0.5 m³/h):

- stainless steel frame;
- solenoid valve at the inlet to the unit;
- 5 µm coarse filter;
- dry-run sensor;
- pressure gauges (feed water pressure and operating pressure at the membranes);
- rotameters (permeate, concentrate and recirculation lines);
- multistage stainless steel pump;
- pressure housings for stainless steel membranes;
- sensor for shutting down the system by the upper level in the storage tank;
- line of hydraulic flushing of membranes;
- system for filling the membrane housings with permeate during downtime;
- automation system with a logic controller;
- set of pipelines and shut-off and control valves.

Complete sets (0.75 to 1 m³/h):

- stainless steel frame;
- solenoid valve at the inlet to the unit;
- 5 µm coarse filter;
- dry-run sensor;
- pressure gauges (feed water pressure, pressure after the mechanical filter and operating pressure at the membranes);
- rotameters (permeate, concentrate and recirculation lines);
- multistage stainless steel pump;
- pressure housings for stainless steel membranes;
- sensor for shutting down the system by the upper level in the storage tank;
- line of hydraulic flushing of membranes;
- system for filling the membrane housings with permeate during downtime;
- ports for chemical washing of membranes;
- automation system with a logic controller;
- set of pipelines and shut-off and control valves.

PRESTIGE PROFI

Geyser Prestige Profi water purification system is designed for additional treatment of tap water or as one of the stages of purification of borehole or well water. Geyser Prestige Profi effectively purifies water from hardness salts, mechanical impurities, organic compounds, bacteria, viruses, dissolved and colloidal iron and nitrates, removes flavors, odors and color of water.

All materials from which the water treatment system is made are safe and suitable for contact with drinking water.

Specification

Item	Model	Drainage, l/day	Dimensions, mm	Type of membranes	Capacity (at a temperature of treated water of 25°C)4, l/day	Voltage, V/Hz	Weight, kg (without water)
20012	Profi 1	up to 1150	430 x 270 x 860	100 GPD	up to 720*	220/50	27
20258	Profi 2	up to 1500		200 GPD	up to 1350*		29

* Data depend on the quality of the feed water

Requirements for feed water (supplied to the reverse osmosis system)

Water pressure at system inlet, atm	2-6
pH	6-9
Water temperature, ˚C	+4...+40
Mineralization, mg/l	max. 2000
Chloride concentration total, mg/l	max. 1200
Hardness, mg-eq/l	max. 10
Iron^3, mg/l	max. 1
Manganese, mg/l	max. 0,3
Permanganate index, mg O_2/l	max. 25

MAESTRO

Compact reverse osmosis water purification system Geyser Maestro is designed to purify water from centralized water supply sources from excessive hardness, iron, heavy metals, active chlorine and organic substances.

It allows you to get water of high purity, used for the preparation of beverages and gastronomic dishes.
Ideal for coffee shops, bars, pastry shops, cafes and small restaurants that require water with an individual mineral composition.

Specification

Item	Model	Drainage, l/day	Dimensions, mm	Number of membranes	Capacity (at a temperature of treated water of 25°C)[4], l/day	Capacity with the sub-mixture (at treated water temperature of 25°C[4], l/day	Power, W	Voltage, V/Hz	Weight, kg (without water)
20286	Maestro 2000	up to 2600	450 x 410 x 480	1	up to 2000*	up to 3500	110	220/50	27
20287	Maestro 4000	up to 4900		2	up to 4000*	up to 5000	170		29

* Data depend on the quality of the feed water

Requirements for feed water (supplied to the reverse osmosis system)

Feed water consumption, l/h	max. 600
Water pressure at system inlet, atm	2-6
pH	6-9
Water temperature, ˚C	+4...+40
Mineralization, mg/l	max. 1500
Chloride concentration total, mg/l	max. 900
Hardness, mg-eq/l	max. 10
Iron[3], mg/l	max. 3
Manganese, mg/l	max. 0,3
Permanganate index, mg O_2/l	max. 10
Turbidity, mg/l	max. 5,2

GEYSER LINE

Geyser Line water purification system is designed for after purification of tap water.
The filter reduces the total salt content (mineralization), including hardness salts, to drinking standards. Removes heavy metals (lead, cadmium, copper, iron, chromium, etc.) and radioactive elements (cobalt, polonium, cesium, radium) from water. Purifies nitrates, nitrites, sulfates and organic compounds. Completely detains pathogenic bacteria and pathogenic viruses. Eliminates flavors, odors and color of water.

When selecting a purification system for borehole and well water, we recommend consulting with Geyser specialists. All materials from which the water treatment system is made are safe and suitable for contact with drinking water.

Specification

Item	Model	Drainage, l/day	Dimensions, mm	Number of membranes	Capacity (at a temperature of treated water of 25°C)[4], l/day	Power, W	Voltage, V/Hz	Weight, kg (without water)
20285	GEYSER LINE	up to 2700	460 x 220 x 545	1	up to 1500	80	220/50	15

Requirements for feed water* (supplied to the reverse osmosis system)

Feed water consumption, l/h	max. 600
Water pressure at system inlet*, atm	2-6
pH	6-9
Water temperature, ˚C	+4...+40
Mineralization, mg/l	max. 2000
Chloride concentration total, mg/l	max. 1200
Hardness, mg-eq/l	max. 10
Iron[3], mg/l	max. 5
Manganese, mg/l	max. 0,3
Permanganate index, mg O_2/l	max. 25
Turbidity, mg/l	max. 5,2

GEYSER OKHTA

Your personal water treatment plant.

Geyser Okhta system is designed to produce especially pure drinking water. Convenient as a post-treatment of tap water, water from ponds, wells, boreholes, etc.

The main element is a reverse osmosis membrane, which passes only H2O molecules and detains impurities: insoluble substances, hardness salts, toxic organic substances, bacteria, viruses, etc.

Advantages:

- Guarantee of high quality drinking water.
  Reverse osmosis membrane provides a stable high degree of water purification regardless of the spectrum of impurities and seasonal changes in the composition of the feed water.
- Eco-friendliness.
  No chemical reagents are used to operate the system. (Reverse osmosis water purification does not use hazardous chemicals). Drainage water generated by the unit is chemically neutral and does not disrupt the operation of the septic tank.
- Simplicity.
  Easy connection and installation, easy maintenance and connection to the storage tank and water supply system.
- Reliability.
  Vandal-resistant design in an all-metal housing with the possibility of individual access.
  (This basically duplicates the individual access - Simultaneous child protection).
- Visualization.
  Indication of feed water consumption and amount of treated water by devices on the door; light indication of system operation modes.
- Mobility.
  If it is necessary to preserve the unit for the winter period, the reverse osmosis unit can be easily dismantled and moved to a safe place.

The patented system of filling the unit with purified water prevents biofouling of the membranes during downtime and significantly increases the service life of the membranes.

Specifications of units:

Item	Model	Drainage, l/day	Dimensions, mm	Number of membranes	Capacity, l/day	Weight, kg (without water)
20281	Geyser Okhta 1500	up to 2400	550 × 380 × 960	1	up to 1500	35 kg
20282	Geyser Okhta 3000	up to 3800		2	up to 3000	38 kg
20283	Geyser Okhta 4500	up to 6300		3	up to 4500	43 kg
20284	Geyser Okhta 6000	up to 7500		4	up to 6000	45 kg

GEYSER PRESTIGE MAXI

Geyser Prestige Maxi water purification system is designed for additional treatment of tap, borehole or well water. Geyser Prestige Maxi effectively purifies water from hardness salts, mechanical impurities, organic compounds, bacteria, viruses, dissolved and colloidal iron and nitrates, removes flavors, odors and color of water.

The systems are designed for both domestic applications and small businesses.

Features of the standard version units:

- Extended membrane service life due to pre-filters
- Reduced water consumption due to balanced filtrate/drainage ratio, possibility of manual adjustment of drainage flow
- Possibility of visual control of pressure in the system before the membrane elements to assess the degree of contamination of the filter elements and individual adjustment of the filtrate/drainage ratio
- Postfilter of increased volume (20Sl)
- Easy connection due to the convenient mounting block
- Possibility to connect the membrane filling system in idle mode
- Possibility to easily connect a storage tank of any volume
- Possibility of adapting the system to treat water with special properties

Specifications of units:

Item	Model	Drainage*, l/day	Dimensions, mm	Number of membranes	Capacity*, l/day	Weight, kg (without water)
20277	Prestige Maxi 1500	up to 2400	430 × 270 × 860	1	up to 1500	25 kg
20278	Prestige Maxi 3000	up to 3800		2	up to 3000	27 kg
20279	Prestige Maxi 4500	up to 6300		3	up to 4500	32 kg
20280	Prestige Maxi 6000	up to 7500		4	up to 6000	34 kg

* Data depend on the quality of the feed water

VONTRON INDUSTRIAL MEMBRANE ELEMENTS

VONTRON

MEMBRANE ELEMENTS

Specifications:

Type of membrane	Selectivity coefficient	Active membrane area	Membrane size (diameter x 0.1), IN INCHES	Membrane size (length), in inches	Indication of operating pressure
XLP - extreme low pressure reverse osmosis membrane element (XLP - extreme low pressure) ULP - ultra low pressure reverse osmosis membrane element (ULP - ultra low pressure) LP - low pressure reverse osmosis membrane element (LP - low pressure) SW - membrane reverse osmosis element for seawater (SW - seawater) FR - membrane reverse osmosis element resistant TO CONTAMINATION HOR - reverse osmosis membrane element resistant to oxidation	1 – minimum selectivity, maximum performance 2 – average selectivity, average performance 3 – maximum selectivity and minimum performance	1 – 85 sq. ft. for the 4040 element 365 sq. ft. for the 8040 element 2 – 400 sq. ft. for the 8040 element	80 – 8 inches 40 – 4 inches 25 – 2.5 inches	40 – 40 inches 21 – 21 inches 14 – 14 inches	Optionally specified: X - XLP L - LP U - ULP S - SW
Example:					
ULP	2	1	80	40	

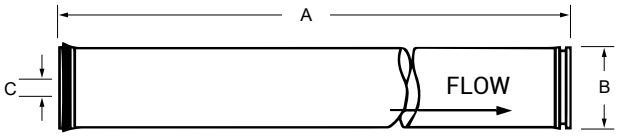
Specifications:

Type	Model	Item	Separation, %	Average Permeate Capacity, gpd (m^3/day)	Pressure, psi (MPa)	NaCl salt content (ppm)	Filtrate recovery rate, %
General industrial membranes	LP21-8040		99,5	9600 (36,3)	225 (1,55)	2000	15
	LP22-8040		99,5	10500 (39,7)			
	LP21-4040	28436	99,5	2400 (9,1)			
	LP100-4040	28477	99,7	2500(9,5)			
	LP440-8040	28475	99,7	12500(47,3)			
	XLP11-4040		98,0	2000 (7,6)	100 (0,69)	500	15
	ULP21-8040	28410	99,0	11000 (41,6)	150 (1,03)	1500	15
	ULP12-8040		98,0	13200 (49,9)			
	ULP22-8040		99,0	12100 (45,7)			
	ULP32-8040	28439	99,5	10500 (39,7)			
	ULP11-4040	28426	98,0	2700 (10,2)			
	ULP21-4040	28409	99,0	2400 (9,1)			
	ULP31-4040	28427	99,4	1900 (7,2)			
	ULP11-4021		98,0	1000 (3,78)	150 (1,03)	1500	8
	ULP21-4021		99,0	950 (3,6)			
	ULP31-4021		99,4	850 (3,2)			
	ULP21-2521		99,0	300 (1,13)			
	ULP21-2540		99,0	750 (2,84)			15
	ULP440-8040	28476	99,5	12000(45,5)			
	ULP100-4040	28478	99,4	2800(10,6)			
Seawater membranes	SW21-8040	28481	99,7	5000 (18,9)	800 (5,5)	32800	4
	SW22-8040		99,7	6000 (22,7)			
	SW21-4040	28482	99,5	1400 (5,3)			
	SW11-2540		99,2	500 (1,89)			
	SW11-4021		99,2	750 (2,8)			8
	SW11-2521		99,2	200 (0,76)			
FR	FR11-8040		99,5	9600 (36,3)	225 (1,55)	2000	15
	PURO-1		99,5	10500 (39,7)			
	FR11-4040		99,5	2200 (8,3)			
HOR	HOR21-8040		99,2	9000	225 (1,55)	2000	15
	HOR21-4040		99,2	2200			

DIMENSIONS

VONTRON-8040

A=1016,0 mm (40")
B=201,9 mm (7,95") C=28,6 mm (1,125")

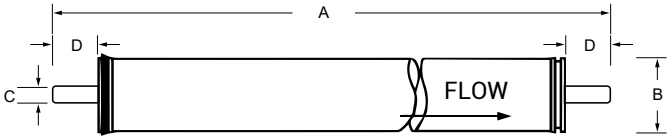


VONTRON-4040

A=1016,0 mm (40") B=99,7 mm (3,9")
C=19,1 mm (0,75") D= 26,7 mm (1,05")

VONTRON-4021

A=533,4 mm (21") B=99,7 mm (3,9")
C=19,1 mm (0,75") D= 30,2 mm (1,19")



VONTRON-2540

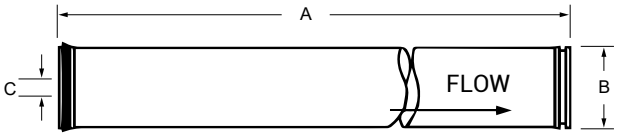
A=1016,0 mm (40") B=61,0 mm (2,4")
C=19,1 mm (0,75") D= 30,2 mm (1,19")

VONTRON-2521

A=533,4 mm (21") B=61,0 mm (2,4")
C=19,1 mm (0,75") D= 30,2 mm (1,19")

VONTRON-LP440-8040

A/mm(inch) 1016 (40)
B/mm(inch) 201 (7,9) C/mm(inch) 29 (1,125)



MEMBRANE HOUSINGS

Item	Model
23814	Membrane housing stainless steel 4040, welded seam
23464	P-2 Series (4 inch) 300 PSI Side Entry (size 1") 2x4040 carbon fiber membrane housing
23465	P-3 Series (8 inch) 300 PSI Side Entry (size 1-1/2") 2x8040 carbon fiber membrane housing
23476	P-3 Series (8 inch) 300 PSI Side Entry (size 1-1/2") 3x8040 carbon fiber membrane housing
23517	P-3 Series (8 inch) 300 PSI Side Entry (size 1-1/2") 4x8040 carbon fiber membrane housing.

A UNIVERSAL SOLUTION - THE GEYSER AQUACHIEF FILTER

GEYSER AQUACHIEF

Geyser AQUACHIEF are filters with granular load, which effectively remove dissolved iron, manganese, organic iron, hardness salts, heavy metal ions, humic and fulvic acids from water through the use of a unique filtering media Ecotar.

The uniqueness of the load and the technology of its application is that for the treatment of the most complex water, instead of 3-4 housings, it is enough to use only one. Regeneration (restoration of properties) of Ecotar media is carried out by washing it with a solution of table salt.

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The diameter and height of the housing, as well as the volume of the filter media are selected according to the data on the hourly and daily consumption of purified water.

The compact models of Geyser AQUACHIEF filters are produced under the name Cabinet. The special feature of these models is that the filter housing is placed directly in the salt tank of a special shape, the so-called "cabinet". This saves a lot of space, which is very important when installing this unit in an apartment.

AQUACHIEF filter advantages:

- Complete water treatment with a single device
- Low initial cost and operating expenses
- Regenerated with an available and inexpensive reagent – table salt
- pH, anionic composition, presence of organic substances do not affect the efficiency of iron and manganese removal
- The effectiveness has been proven at numerous facilities

GEYSER AQUACHIEF CABINET

Geyser AQUACHIEF Cabinet is a compact ion-exchange filter in which the filtering column and the salt tank are combined in a single unit. The filter consists of the following elements: a filter column with a drainage and distribution system (installed inside the housing). The housing, which is also a salt tank, equipped with a system for the supply and preparation of saline solution, control valve.

Na-cationic exchange resin or multi-component Ecotar ion-exchange media are used as filter media.

Applicable in systems of domestic and drinking water supply of apartments and cottages.

System features:

- One of the 5 types of Ecotar media or cation exchange resins can be used in the filter depending on the natural composition and pollution of the feed water
- Automatic control by the volume of purified water will save a lot of salt

RUNXIN

Advantages of AQUACHIEF Cabinet 1035 Rx (R1500):

- Touch buttons (responds to heat)
- Quick-release salt line and drainage connections
- Compact dimensions
- Removable lid (for filling salt)
- Smart, streamlined and modern appearance

Accessories: bypass valve, bellows connection hose, drain hose

Specifications:

Parameters	1035 Rx (R1500)
Media volume, liters -Ecotar (A, A Bio, B, B30, C, C30) or cation exchange resin -gravel	 20 4
Operating/peak capacity, m³/hour	0,9/1,2
Regeneration	by the volume of purified water
Salt consumption for 1 regeneration, kg	2,4
Connection dimensions: Inlet-Outlet-Drain, inch	1"-1"-1/2"
Salt line, inch	3/8"
Power supply, V/Hz	240/50/60
Operating pressure, atm	1,6 - 6,0
Overall dimensions, mm	480 × 312 × 1053
Item	35490

Geyser AQUACHIEF 1035 RX Cabinet (R1500EO) system is used in domestic and industrial water supply. The unit is a complex filter of iron, manganese, salts of hardness, natural organics. Depending on the composition of the feed water in the filters

The media is purchased separately based on the results of the feed water analysis.

System features:

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Specifications:

Parameters	1035 Rx (R1500EO)
Media volume, liters - Ecotar (A, A Bio, B, B30, C, C30) or cation exchange resin - gravel	 20 4
Operating/peak capacity, m³/hour	0,9-1,2
Regeneration	by the volume of purified water
Salt consumption for 1 regeneration, kg	2,4
Connection dimensions: Inlet-Outlet-Drain, inch	3/4"
Salt line, inch	3/10"
Power supply, V/Hz	220/50
Operating pressure, atm	1,6-6,0
Overall dimensions, mm	492 × 410 × 1064
Item	36567

CABINET WAVE CYBER HOUSING (WITH COLUMN). WITHOUT CONTROL VALVE

GEYSER

Designed for use in water treatment systems of country houses and cottages. It is used to purify water from various impurities and improve the chemical analysis of water. The set includes a salt system with shaft, cabinet body, cylinder 0835.

Specifications:

Parameters	0835 (WC) cabinet housing (with column)
Media volume, liters - Ecotar (A, A Bio, B, B30, C, C30) or cation exchange resin - gravel	 12 5
Operating/peak capacity, m³/hour	0,6-0,8
Salt consumption for 1 regeneration, kg	1,4
Operating pressure, atm	1,6-6 ,0
Overall dimensions, mm	907× 331 ×583
Item	36824

Specifications:

Parameters	1035 (WC) cabinet housing (with column)
Media volume, liters - Ecotar (A, A Bio, B, B30, C, C30) or cation exchange resin - gravel	 20 4
Operating/peak capacity, m³/hour	0,9 - 1,2
Salt consumption for 1 regeneration, kg	2,4-3
Operating pressure, atm	1,6-6 ,0
Overall dimensions, mm	907× 331 ×907
Item	36825

GEYSER

Compact water purification system from iron, manganese, salts of hardness and natural organics (with Ecotar media)

Advantages:

- Multilingual menu, including Russian
- Convenient touch control
- Integrated bypass
- Easy installation (quick-release fittings)
- Button autolock
- Vacation mode (to save salt consumption)
- Convenient slider cover

Specifications:

Parameters	Geyser CS16H-1017	Geyser CS16H-1035
Media volume, liters - Ecotar (A, A Bio, B, B30, C, C30) or cation exchange resin - gravel	 10 2	 20 4
Operating/peak capacity, m³/hour	0,9/1,2	
Regeneration	by the volume of purified water	
Salt consumption for 1 regeneration, kg	1,2	2,4
Connection dimensions: Inlet-Outlet-Drain, inch	1"-1"-1/2"	
Salt line, inch	3/8"	
Power supply, V/Hz	220/50	
Operating pressure, atm	1,6 - 6,0	
Overall dimensions, mm	320 × 475 × 582	320 × 475 × 1042
Item	36339	36340

FILTER AND SOFTENER CONTROL UNITS

RUNXIN CONTROL UNITS

Runxin control units are designed to switch the water flow inside the fast filter housing with a granular media. The three-cycle models (filter control units) allow switching between the following modes: filtration, backwashing of the media, backwashing of the media with a direct water flow. The five-cycle models (softener control units) allow switching between the following modes: filtration, backwashing of the load with feed water flow, load regeneration with reagent from the tank through the built-in injector, load flushing from excess reagent, filling the tank with water to prepare the regeneration solution.

The design of most Runxin control units is as follows: Inside the rugged acrylonitrile butadiene styrene housing, there are two smooth discs on top of each other, one is moving and the other is stationary. The moving disc is driven either manually or by an electric motor. The discs are divided into sections by partitions. At the moment the sections are aligned, a through hole is formed in the upper and lower discs, through which the water flows. In automatic control units, an electric motor turns on and turns the disc by receiving a signal from a timer or processor connected to the flowmeter turbine. When the disk is in the right position, the motor receives a stop signal. After the process is complete, the motor receives a new signal and the disk rotates to the next position. And it continues until all programmed modes are completed.

The F78 series control units are additionally equipped with four pistons whose position (one of two) is controlled by a combination of moving and stationary discs.

The moving disc is ceramic, made at 1680°C, more than 95% consists of Al_2O_3, hardness more than 85°, surface roughness does not exceed 0.0003 mm, deviation from the mutual parallelism of the discs does not exceed 0.015 mm.

All control units are tested for operating pressures from 1.0 to 6.0 atm. NSF certified.

NSF certified.

EXPLANATION OF THE NUMERICAL MODEL DESIGNATIONS

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1 2 3 Maximum capacity, m³/hour

1 Type of unit

1 – special application unit
4 – replacement part
5 – filter control unit
6 – control unit for softener with direct flushing with brine (DF)
7 – softener control unit with countercurrent brine flushing (UF)
8 – softener control unit with possible flushing with brine; flow in both directions
9 – control unit for the floating softener

2 Type of interface

1 – manual control
2 – liquid-crystal display (LCD)
3 – LED screen
0 – semi-automatic control

3 Type of regeneration

1 – manual; block with metal handle
2 – manual; block with plastic handle
5 – automatic (at a set time)
6 – automatic (by the signal from the built-in flow meter)
7 – automatic (by signal from an external data processing device)
0 – other

MANUAL FILTER CONTROL UNITS

ADAPTER 900

51102 (F56E)

51104 (F56A)

51110 (F56D)

Item	Model (designation)		Вход/ выход	Дренаж	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old							
34190	Adapter 900 (header) for 2.5 housings		1"	not available	2,5"–8NPSM	1,05"OD	-	-	inlet/outlet adapter
34250 34242	51102	F56E	1/2" or 3/4"	1/2" or 3/4"	2,5"–8NPSM	1,05"OD	2	6"–12"	–
34218	51104	F56A	1"	1"	2,5"–8NPSM	1,05"OD	4	6"–18"	–
34241	51110	F56D	2"	1,5"	4"–8UN	1,5"D–GB	10	18"–30"	–

MANUAL CONTROL UNITS FOR SOFTENERS

Features:

- Disk valve design
- The filter outlet is closed during flushing
- The handle can rotate almost 180°

61202 (F64B)

61104 (F64A)

61210 (F64D)

Item	Model (designation)		Inlet/ outlet	Drain	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
34249	61202	F64B	3/4"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	2	6"–12"	DF
34230	61104	F64A	1"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	4	6"–18"	DF
35272	61210	F64D	2"	1"	1/2"	4"–8UN	1,5"D–GB	10	18"–30"	DF

Features:

- Disk valve design (F112, F96 have a piston design)
- LED screen
- Indication of a long power outage; the entered parameters are stored for 3 days
- The filter outlet is closed during flushing (no bypass)
- Connector for an external controlled device
- Possibility to set several backflushes in a row
- Control signal input connector
- Button lock

53502
(F71B1)

53510
(F75A1)

53504
(F67C1)

53550
(F96B1)

53518
(F77B1)

53540
(F112B1)

Item	Model (designation)		Inlet/ outlet	Drain	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old							
35103	53502	F71B1	3/4"	3/4"	2,5"–8NPSM	1,05"OD	2	6"–12"	
35330	53504	F67C1	1"	1"	2,5"–8NPSM	1,05"OD	4	6"–18"	
35270	53510	F75A1	2"	2"	4"–8UN	1,5"D–GB	10	18"–30"	
35269	53518	F77B1	2"	2"	4"–8UN	1,5"D–GB	18	16"–36"	
35497	53540	F112B1	DN65	DN65	DN80		40	24"–48"	side mounting
36349	53550	F96B1	DN80	DN80	DN100		50	48"–63"	side mounting

Features:

- Four-digit display
- Universal electronic boards are suitable for all control units of this series (except the position board: different boards are used for different valve capacities)
- No regeneration signal (interlock)
- Control valve does not let water through during regeneration
- Output signal (dry contact no/com/nc)
- F67P, F71P have the ability to perform two or more consecutive flushes in one cycle

53502P
(F71P1-A)

53504P
(F67P1-A)

Item	Model (designation)		Inlet/ outlet	Drain	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size
	New	Old						
36242	53502P	F71P1-A	3/4"	3/4"	2,5"–8NPSM	1,05"OD	2	6"–10"
36243	53504P	F67P1-A	1"	1"	2,5"–8NPSM	1,05"OD	4	6"–16"

Q-SERIES

55502
(F71Q1)

55504
(F67Q1)

65603
(F117Q3)

65605
(F116Q3)

55510
(F75Q1)

65610
(F74Q3)

Item	Model (designation)		Inlet/ outlet	Drain	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
36561	55502	F71Q1	G3/4	G3/4	–	2,5"-8NPSM	1,05"OD	2	6-12	
36562	55504	F67Q1	G1	G1	–	2,5"-8NPSM	1,05"OD	4	6-18	
36846	55510	F75Q1	G2	G2	–	8NPSM	1,5"D-GB	10	18-30	
36568	65603	F117Q3	G3/4	NPT3/4	G3/8	4"-8UN	1,05"OD	3	6-13	DF
36560	65605	F116Q3	G1	NPT3/4	G3/8	2,5"-8NPSM	1,05"OD	5	6-18	DF
36845	65610	F74Q3	G2	G2	G½	4"-8UN	1,5"D-GB	10	18-30	DF

AUTOMATIC CONTROL UNITS FOR SOFTENERS

BY TIMER

63504
(F63C1)

63510
(F74A1)

63518
(F77A1)

63502
(F65B1)

Item	Model (designation)		Inlet/ outlet	Drain	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
35809	63502	F65B1	3/4"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	2	6"–12"	DF
35808	63504	F63C1	1"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	4	6"–18"	DF
35273	63510	F74A1	2"	1"	1/2"	4"–8UN	1,5"D–GB	10	18"–30"	DF
35275	63518	F77A1	2"	1,5"	3/4"	4"–8UN	1,5"D–GB	18	18"–42"	DF

BY WATER CONSUMPTION

Features:

- Disk valve design (F112, F96 have a piston design)
- LED screen
- Indication of a long power outage, the entered parameters are stored for 3 days
- The filter outlet is closed during flushing
- Connector for an external controlled device
- Control signal input connector
- Button lock
- Regeneration time is set both on the set day and on the set time
- Water flow control units have four configurable regeneration start modes: immediate regeneration by volume, delayed regeneration by volume, immediate regeneration with automatic resource calculation, delayed regeneration with automatic resource calculation
- Possibility to set backflushing not in every regeneration cycle
- Flow control units can regenerate independently of water consumption at a set interval (0–40 days)
- The F77 control unit can be installed either on top or on the side of the filter housing
- In F77, F78 control units the reagent tank is filled in the operating mode; the filling mode of the salt tank is controlled by a ball valve with a servo motor

73602
(F65B3)

63660
(F96A3)

63604
(F63C3)

63610
(F74A3)

63640
(F112A3)

63618
(F77A3)

Item	Model (designation)		Inlet/ outlet	Drain	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
35491	73602	F65B3	3/4"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	2	6"–12"	DF
35372	63604	F63C3	1"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	3,5	6"–18"	DF
35274	63610	F74A3	2"	1"	1/2"	4"–8UN	1,5"D–GB	10	18"–30"	DF
35276	63618	F77A3	2"	1,5"	3/4"	4"–8UN	1,5"D–GB	18	18"–42"	DF
36405	63640	F112A3	DN65	DN65	3/4"	DN80		45	24"–63"	side mounting, DF
36350	63660	F96A3	DN80	DN80	3/4" M	DN100		60	48"–63"	side mounting, DF

Features:

- Main board:
  -no connector for pressure relief valve
  -no remote control connector
  -optical sensor on the position board instead of Hall sensors
  -no DIP switches
- Display board:
  - no flashing bars of indication
  - no flushing by the hour
  - water volume only in m3
  - the minimum unit of time is a minute
  - only 2 modes - A01/02
- Valve position board:
  - includes one optical sensor instead of multiple Hall sensors
  - the same for valves of the same capacity
- Drive gear wheel:
  - individually for each valve

63602P
(F65P3-A)

63604P
(F63P3-A)

Item	Model (designation)		Inlet/ outlet	Drainage	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
36244	63602P	F65P3-A	3/4""	1/2"	3/8"	2,5"–8NPSM	1,05"OD	2	6"–12"	DF
36245	63604P	F63P3-A	1"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	4,5	6"–18"	DF

Features:

- Liquid-crystal display (LCD)
- Indication of a long power outage, the entered parameters are stored for 3 days
- Possibility to set both direct flow and counterflow regeneration with saline solution
- Ability to mix feed water with softened water (to obtain water of a certain hardness)
- Connector for the electrolytic chlorine generator for disinfecting the load
- Indicator of insufficient amount of salt
- Programmable 3-cycle operation
- Availability of archive data

82602A
(F79A–LCD)

82604B
(F82B–LCD)

Item	Model (designation)		Inlet/ outlet	Drainage	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
35418	82602A	F79A–LCD	3/4″	1/2″	3/8″	2,5″–8NPSM	1,05″OD	2	6″–12″	No bypass DF/UF
35279	82604B	F82B–LCD	1″	1/2″	3/8″	2,5″–8NPSM	1,05″OD	3,5	6″–16″	Bypass DF/UF

Features:

- Disk valve design
- One unit controls the operation of two filter housings: when one of the housings is in operation, the second is regenerated or in standby mode
- Regeneration is performed on the basis of processing the volume of purified water
- Double-acting flow redistribution mechanism: performs both switching between housings and regeneration

17603
(F73)

Артикул Item	Model (designation)		Inlet/ outlet	Drainage	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
	New	Old								
35281	17603	F73	1"	1/2"	3/8"	2,5"–8NPSM	1,05"OD	3,5	6"–14"	DF/UF

CLACK CONTROL UNITS

Control units with piston water flow switching mechanism. Made of high-strength composite plastic. The unit consists of a housing with channels, a piston driven by an electric motor, a board with a microprocessor, a water flow controller (for softeners with regeneration based on the results of monitoring the volume of passing water). Can be configured to work as a filter valve (three-cycle) and softener (five-cycle), i.e. have a unified design.

All control units are tested for operating pressures from 1.4 to 8.6 atm.

Type of interface — LCD.

Features:

- The reagent tank is filled with treated water
- Storage of system and operating data settings in non-volatile memory (built-in capacitor keeps the clock running in case of power failure for up to 2 hours)
- Resistance to chemical reagents: sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines

WS1 TC

WS1 CI

Item	Model	Inlet/ outlet	Drain	Salt line	Coupling size	Diameter of distribution system pipe	Max. capacity, m³/h	Filter housing size	Note
34219 34237	WS1 TC	1"	3/4"	3/8"	2,5"–8NPSM	1,05"OD	6,1	8"–18"	DF, timer
34238 34220	WS1 CI	1"	3/4"	3/8"	2,5"–8NPSM	1,05"OD	5,7	8"–18"	UF/DF, flow meter

WS1 TC CONTROL UNIT

- Two consecutive backflushes are available
- Adjustable flushing intervals: from 1 to 99 days
- The controller has 10 preset regeneration cycles

WS1 CI CONTROL UNIT

- Three modes of operation: immediate regeneration by counter signal, delayed regeneration by counter signal, delayed regeneration by timer signal
- Fully programmable regeneration cycle with any sequence of modes (up to 9 modes)
- Programmable duration of regeneration modes
- Possibility of forced start of regeneration with setting from 1 to 28 days
- Installation of a mixing valve is possible
- Low salt level indicator

FILTER HOUSINGS

CANATURE FIBERGLASS

Canature fast filter housings are made of a composite material with fiberglass filament wrapped around it using seamless technology. All threaded holes in the housings are made of glass-filled polypropylene for high strength; the threaded insert has a mechanical lock. The wall thickness of the housing ranges from 3.0 to 8.0 mm, depending on its diameter. All parts of the housings that come in contact with water are made of corrosion-resistant, food-grade materials.
Housings come in diameters from 8 to 63 inches and heights from 17 to 86 inches. Compatible with standard control units and fittings from various manufacturers.
Certified to NSF44 and TUV requirements. Successfully withstands 250,000 cycles of pressure changes from 0 to 10.2 atm, compared to NSF requirements of 100,000 times. The bursting pressure (40.8 atm) is four times the operating pressure. The frequency of manufacturing defects is one per 750,000 pieces, which speaks for the high quality of the products.

Specifications:

Parameters	
Operating pressure, atm	10,5
Maximum allowable vacuum inside the housing, atm	0,18
Operating temperature, 0C	+1...+42
Color	natural

Item	Cylinder typical size	Volume, l	Weight, kg	Opening	Dimensions, mm	
					Height	Diameter
35353	8 × 35	23,6	4,05	2,5"–8–NPSM	897	205
35345	8 × 44	31,3	4,45	2,5"–8–NPSM	1122	205
35346	10 × 44	48,8	6,19	2,5"–8–NPSM	1121	258
35347	10 × 54	61,0	7,69	2,5"–8–NPSM	1381	258
35348	12 × 52	84,7	8,63	2,5"–8–NPSM	1338	307
35349	13 × 54	105,7	10,6	2,5"–8–NPSM	1398	335
35350	14 × 65	148,0	14,8	2,5"–8–NPSM	1674	366
35351	16 × 65	188,6	19,47	4"–8–UN	1706	411
35352	18 × 65	257,0	28,1	4"–8–UN x 2	1722	491
35354	21 × 62	351	39	4" T&B	2 064	555
35447	24 × 72	494	51	4" T&B	2 168	611
35445	30 × 72	720	65	4" T&B	2 140	781
35446	36 × 72	1 023	101	4" T&B	2 150	934
35443	42 × 72	1 530	172	6" FLG T&B	2 395	1 090
35444	48 × 72	1 950	252	6" FLG T&B	2 400	1 235
35779	63 × 67	2 114	315	6" FLG T&B	2 025	1 600
36280	63 × 86	2 965	350	6" FLG T&B	2 465	1 600

CANATURE HY FIBERGLASS

Canature HY filter housings are made of a composite material with fiberglass filament wrapped around it using seamless technology. All threaded holes in the housings are made of glass-filled polypropylene for high strength; the threaded insert has a mechanical lock. All parts of the housings that come in contact with water are made of corrosion-resistant, food-grade materials.

Housings are available in diameters from 8 to 63 inches (over 18 inches by pre-order) and heights from 17 to 83 inches. Compatible with standard control units and fittings from various manufacturers.

NSF and CE certified. Successfully withstand 100,000 cycles of pressure changes from 0 to 10.5 atm. The bursting pressure (42 bar) is four times the operating pressure.

Specifications:

Parameters	
Operating pressure, atm	10,5
Maximum allowable vacuum inside the housing, atm	0,17
Operating temperature, 0C	+1...+49
Color	natural/ green

Item	Cylinder typical size	Volume, l	Weight, kg	Opening	Dimensions, mm	
					Height	Diameter
38016	08 × 17 2.5–0	10,5	2	2,5"–8–NPSM	440	205
38010	08 × 35 2,5–0	24	4,05	2,5"–8–NPSM	898	205
38000	08 × 44 2,5–0	32,5	4,45	2,5"–8–NPSM	1 125	205
38017	10 × 35 2.5–0	38,3	5,1	2,5"–8–NPSM	910	257
38001	10 × 44 2,5–0	49,5	6,19	2,5"–8–NPSM	1 130	257
38011	10 × 54 2,5–0	61,9	7,69	2,5"–8–NPSM	1 390	257
38002	12 × 52 2,5–0	87,0	8,63	2,5"–8–NPSM	1 338	307
38003	13 × 54 2,5–0	103,6	10,6	2,5"–8–NPSM	1 400	334
38004	14 × 65 2,5–0	145,6	14,8	2,5"–8–NPSM	1 665	360
38015	14 × 65 4–0	145,6	14,8	4"–8–UN	1 662	360
38005	16 × 65 4–0	187,7	19,47	4"–8–UN	1 670	410
38021	16 × 65 2,5–0	187,7	19,47	2,5"–8–NPSM	1 670	410
38012	18 × 65 H 4–4	249	30	4"–8–UN x 2	1 870	465
38023	18 × 65 H 4–0	249	28,89	4"–8–UN	1 830	465
38006	21 × 62 H 4–4	326	39	4"–8–UN x 2	1 910	550
38022	21 × 62 H 4–0	326	35,54	4"–8–UN	1 910	550
38007	24 × 72 H 4–4	471	56,8	4"–8–UN x 2	2 150	615
38024	24 × 72 H 4–0	471	45,54	4"–8–UN	2 150	615
38008	30 × 72 H 4–4	745	83	4"–8–UN x 2	2 140	780
38009	36 × 72 H 4–4	993	113,2	4"–8–UN x 2	2 150	918
38018	42 × 72 H 6–6	1 362	159	6" FLG T&B	2 270	1 088
38019	48 × 72 H 6–6	1 743	194	6" FLG T&B	2 270	1 218
38020	63 × 83 H 6–6	3 050	333	6" FLG T&B	2 400	1 620

HELIX FIBERGLASS

The backfill filter housing is a vertical hollow cylinder with a dome-shaped top and bottom. This shape ensures optimal hydraulic performance of the filter.

A special ring base is used at the bottom for stability. In the top of the housing is a neck, through which the assembly and filling of the filter is carried out. In larger housings, a similar neck is also made at the bottom to facilitate the assembly and maintenance of the filter. During operation, the lower neck is closed with a special plug.

The inner housing layer consists of a polyethylene liner. The liner is made of polymers used (certified) for safe contact with water and for its subsequent use. The outer layer of the housing consists of fiberglass made by continuous winding with the addition of epoxy resin.

A distribution system is inserted through the top of the housing: consisting of an upper slotted cap, a water supply pipe and a lower distribution system. For a housing with two ports there is only the upper and lower distribution system.

Technical characteristics of the backfill filter housing:

Operating pressure up to 10.5 bar.

Maximum pressure is 15 bar.

Operating temperature - 1 - 49 ° C.

Color - natural, tinted.

Max. negative pressure (max. vacuum) - 0.2 bar.

Item	Cylinder typical size	Model	Top/bottom opening	Height, mm	Diameter, mm	Capacity, l
39000	0844X2,5	844	2,5-0	1126	208	34,9
39002	1054X2,5	1054	2,5-0	1395	257	64
39003	1354X2,5	1354	2,5-0	1388	334	104
39004	1465X4-4	1465	4-4	1655	369	157
39006	1665X4-4	1665	4-4	1950	406	188
39011	1865X4-4	1865	4-4	1950	469	266
36944	2162X4-4	2162	4-4	1775	526	270
36945	2472X4-4	2472	4-4	2040	610	458
36946	3072X4-4	3072	4-4	2090	762	703
36947	3672X4-4	3672	4-4	2100	900	946
39007	4272X6-6	4272	6-6	2068	1072	1351
39008	4872X6-6	4872	6-6	2139	1200	1748
39009	6386X6-6	6386	6-6	2475	1633	3416

ANTI-CONDENSATION CASES

FOR BACKFILL FILTER HOUSINGS

Anticondensate cases are designed to protect the housings of water purification systems from sudden temperature drops and the formation of condensation on them. The use of cases significantly reduces the likelihood of mold and mildew in the room where filters are installed.

- They are made of neoprene, a material with unique thermal insulation and energy saving properties
- Full protection against condensation on the housing, dirt and dust
- The case has a full-length zipper, allowing it to be easily removed or put on the case in an already mounted system
- Easy to wash and clean

Item	Backfill filter housing size (inch)
36070	8 x 44
36071	10 x 44
36056	10 x 54
36057	12 x 52
36058	13 x 54
36059	14 x 65
36060	16 x 65

TANK FOR REGENERATION SOLUTIONS

Tanks for regenerating solutions (salt, potassium permanganate) are made of polyethylene. The material from which the tank is made usually includes ultraviolet inhibitors, which increases their resistance to sunlight. Tanks are supplied complete with molded lids, assembled regenerant intake systems and bottom grids (false bottom). Wear-resistant polymer materials and the latest production technology ensure their reliable operation.

Canature tanks are conical in shape, allowing them to be transported by inserting one into the other, which reduces space requirements by 70% and therefore transportation costs.

Lids of the salt tanks of 350–2000 liters contain an additional hatch for easy loading of salt.

Item	Name	Volume, l	Overall dimensions, mm	Well dimensions, mm	Wall thickness, mm	Color
34127	JS/YT–60l	60	390 × 810	100 × 720	4	White
34128	JS/YT–100l	100	450 × 940	100 × 840	4	White
34131	JS/YT–145l	145	500 × 1060	100 × 950	5	White
34132	JS/YT–200l	200	550 × 1160	100 × 1040	5	White
34133	JS/YT–350l	350	740 × 1275	135 × 1260	5	White
34134	JS/YT–500l	500	840 × 1335	135 × 1320	5	White
34135	JS/YT–750l	750	960 × 1395	135 × 1380	5	White
34136	JS/YT–1000l	1000	1080 × 1460	135 × 1430	6	White
on request	JS/YT–1500l	1500	1240 × 1575	135 × 1550	8	White
on request	JS/YT–2000l	2000	1360 × 1690	135 × 1650	8	White
34137	Canature-70	70	332 × 332 × 880	100 × 755	5	Blue
35344	Canature-100	100	382 × 382 × 880	100 × 755	5	Blue
44609	NS	70	332 × 332 × 880	940 × 774	4	White
34105	Clack Round 10 x16	23	260 × 420	105 × 370	4	Black

FILTER MEDIA

Among the most common problems with water are suspended solids, dissolved iron and manganese, salts of hardness, as well as unpleasant taste, odor, color, bacteriological pollution.

Sediment filters are used to remove mechanical particles, sand, suspended solids, rust, and colloidal substances from water. You can use cartridge, bag or disc filters to separate relatively large particles. In cases where the use of these filters is impractical, backfill type systems are used. The filter medium used is mainly quartz sand or dewatered aluminosilicate.

An extensive class of devices called 'softeners' are designed to reduce the hardness of water. Through the use of Ecotar, filters of this type can have a complex effect and can also remove dissolved iron, manganese, salts of heavy metals and organic compounds from water. Filter media require regeneration with saline solution.

De-ironing filters are designed to remove dissolved iron and manganese from water. Various ore and synthetic materials including manganese dioxide (Quantum DMI-65, Pyrolox, Birm, Greensand Plus, etc.) are used as filter media. Manganese dioxide serves as a catalyst in the oxidation reaction, as a result of which iron and/or manganese dissolved in the water turns into insoluble form and precipitates, which is retained in the filter media layer and subsequently washed out into the drain during backflushing. Some of the filter media require regeneration with potassium permanganate solution.

Activated carbon has long been used in water treatment to improve the organoleptic characteristics of water quality (elimination of foreign taste, odor, color). Due to its high adsorption capacity, activated carbon effectively absorbs residual chlorine, dissolved gases, organic compounds. Today, activated carbon from coconut shells is used in charcoal filters, the adsorption capacity of which is much higher than that of charcoal derived from wood.

ECOTAR MULTI-COMPONENT MEDIUM

Ecotar medium is created by rotary mixing of five different ion-exchange and sorption materials. The medium consists of cation-exchange resins of different granulometric composition: large-pore anion-exchange resin, special inert resin and quartz substrate. Mechanical impurities, dissolved iron, manganese, organic iron, hardness salts, heavy metal ions, humic and fulvic acids can be simultaneously removed from water with the help of Ecotar.

Passing through the Ecotar upper layer, water is purified from mechanical impurities larger than 10 microns due to the inert resin, developed by special technology. The inert resin prevents the fine fraction of the Ecotar medium from escaping during backwashing, thus avoiding clogging of the filter control valve.

The main component of the medium is a cation-exchange resin with a fine particle size distribution, in which the ion-exchange centers are located close to the surface. As a result, the extraction of iron ions and hardness salts is much faster because there is no diffusion through the surface protective layer of the pellet, as in conventional cation-exchange resin. At the same time, the regeneration process of the medium is much more efficient.

Due to a special technology of mixing the components, the Ecotar layer forms a densely packed structure and has a large area of contact with water, which contributes to the most complete removal of contaminants.

Iron can form stable negatively charged complexes with organic compounds that are not removed by cation-exchange resins. To remove them, Ecotar contains a coarse-porous anion exchange resin.

To solve the most typical water problems, our company has developed the following seven types of Ecotar medium:

25 l/
12 l

Ecotar A. For dissolved iron, complex iron-organic compounds, salts of hardness, manganese removal from water.

Recommended for purification of water from wells and shallow boreholes. Visual assessment of the feed water: yellow-brown color, sediment is formed during sedimentation.

Ecotar A BIO. It is intended for water purification from dissolved iron, complex organo-hydrocarbon compounds, hardness salts, manganese and water improvement. The medium has a special silver-impregnated activated carbon, which prevents the reproduction of micro-organisms (glandular bacteria) and helps to remove the odor. The medium of this type is recommended for purification of water from wells, shallow boreholes, open surface sources. Visual assessment of the feed water: yellow-brown color, sediment is formed during sedimentation. Marshy, musty smell.

Ecotar B30 / Ecotar B

Ecotar B. It is intended for water purification from dissolved iron (up to 15 mg/l), manganese and hardness salts with low content of organic substances in water. Recommended for purification of water from artesian wells. Visual assessment of the feed water: transparent, colorless, yellowing and giving brown sediment during sedimentation.

Ecotar B30. It is intended for water purification from dissolved iron (up to 30 mg/l), manganese and hardness salts, with low content of organic compounds in water. Recommended for purification of water from artesian wells. Visual assessment of the feed water: transparent, colorless, yellowing and giving brown sediment during sedimentation.

Ecotar A / Ecotar A BIO

Ecotar C/C30. It is intended for purification of water with high content of natural organic compounds, including iron and manganese. Recommended for purification of water from shallow boreholes, wells, open surface sources. Visual assessment of initial water: color from yellow to brown, no sediment is formed during sedimentation.

Ecotar P. Multi-component ion-exchange charge for treatment of dissolved iron (up to 10 mg/l), manganese and hardness salts

Ecotar C / Ecotar C 30

Recommended operating conditions

	Ecotar A/A BIO	Ecotar B	Ecotar B30	Ecotar C/ C 30	Ecotar P
Free chlorine mg/l, max	0,1				
Turbidity mg/l, max	3				
Iron mg/l, max	8	15	30	2	10
Manganese mg/l, max	2	5	5	2	3
Hardness mg-eq/l, max	10	15	15	10/8	15
Permanganate index mg O_2/л, max	10	3	3	20/30	5
Total salt content g/l, max	2				
Item 25 l	40083 / 40091	40081	40084	40082 / 40203	40250
Item 12 l	40218 / 40219	40220	40221	40222 / 40223	—

Physical properties

Parameters	
Physical appearance	a mixture of granules from white to black in color
Operating temperature, °C	+4...+40
Moisture content, %	45–70
Bulk weight, g/l	840–980
Average size, mm	0,3–5,0
pH range	0–14

Conditions of use

Parameters	
Flow rate in operating mode, m/h	10–20
Layer height, minimum cm	50
Regenerant	NaCl
Regenerant dose, g/l	110–130
Concentration, %	10
Backflushing flow rate, m/h	8–12

ACTIVATED COCONUT SHELL CHARCOALS

Item	Name	Description	Physical properties	Conditions of use
40027	GEYSER SILVERED CHARCOAL 0.05% 	High-quality activated carbon from coconut shells, high hardness (>98.5%), large surface area. It exceeds birch charcoal in mechanical strength by more than 1.5 times. They are used to remove free chlorine, organochlorine compounds, improve organoleptic properties of water. Require periodic backflushing to remove trapped suspended solids and redistribute filter media. They have a bactericidal property due to the silvering.	Color: black Iodine index: > 1110 mg/g pH: 9.0-11.0 Bulk density: 0.48-0.55 g/cm^3 Silver M.C.: ≥0.2% Fractional composition: fraction <0.5 mm: <5% fraction <1.7mm: <5% Grain size: 0.65-2.0 mm (12x30 mesh) Carbon tetrachloride (CTC) activity: 60 %	Layer height: 65-75 cm (26-30 inches) Layer expansion: 50% Water flow rate in operating mode: 12-15 m/hour Water flow rate in backflushing mode: 24–30 m/hour The water must first be purified of suspended solids. For long service life, the water should not contain iron, turbidity should be minimal.
40124	GEYSER SILVERED CHARCOAL 0.2% 		Color: black Iodine index: > 1110 mg/g pH: 9.0-11.0 Bulk density: 0.48-0.55 g/cm^3 Silver M.C.: ≥0.05% Fractional composition: fraction <0.5 mm: <5% fraction <1.7mm: <5% Carbon tetrachloride (CTC) activity: 60 %	

Activated carbon from coconut shells to remove odor, color and dissolved organic matter.

Item	Name	Iodine index	Manufacture
40239	ACTIVATED CARBON CE 12 * 30	1110 mg/g	Malaysia
40240	ACTIVATED CARBON CE 18*40		
40277	ACTIVATED CARBON CE 12*30	950 mg/g	
40228	AУ INDO GERMAN 12*30	1110 mg/g	Indonesia
		950 mg/g	
40263	AУ INDO GERMAN 12*40	950 mg/g	
40248	AУ INDO GERMAN 18*40		
40245	AУ INDO GERMAN 12*30	700 mg/g	
40263	AУ INDO GERMAN 12*40	950 mg/g	
40248	AУ INDO GERMAN 18*40		

FOR REMOVAL OF SUSPENDED SOLIDS FROM WATER

Item	Name	Description	Physical properties	Conditions of use
40003 **40108** **40201** **40209** **40254**	QUARTZ SAND AND GRAVEL  **25 kg**	Filter medium obtained by crushing and sieving rocks, characterized by high content of cream oxide (up to 99%) and insignificant amounts of soluble compounds of calcium, iron and manganese. They are used in water purification systems to remove suspended solids as a filter media or a supporting layer of the main material, which prevents it from leaving the filter and clogging the drainage and distribution system.	Color: beige to brown Density: 1.6 g/cm³ Size: 0.3–0.9 mm, 1.0–2.0 mm, 3–5 mm Uniformity coefficient: < 1.6 Solubility in acids: 0.3–1.6 %	When used in a supporting layer, the layer height: 10–20 cm When used as a filter material, filter layer height: 60–90 cm (18-30 inches). Layer expansion during flushing: 20 % Water flow rate in operating mode: 4–12 m/hour Water flow rate in backflushing mode: 36–48 m/hour
40010	FILTER AG  **28,3 l**	Medium for suspended solids removal, which is anhydrous silicon oxide. The pellets have a significant filtering surface and low weight. The material effectively retains suspended particles of the order of 20–40 microns.	Color: light gray Density: 0.38–0.42 g/cm³ Uniformity coefficient: 1.66 Size: 0.6–1.7 mm Hardness: 6 (Mohs scale)	Maximum water temperature: 60 °C Layer height: 60–90 cm (24–36 inches) Layer expansion: 20–40 % Water flow rate in operating mode: 12 m/hour and higher Water flow rate in backflushing mode: 20–24 m/hour
40085	FILTER AG PLUS  **28,3 l**	Material from clinoptilolite ore. The pellets have an angular shape and rough surface pierced by conical micropores smaller than 3 µm. Effectively removes suspended particles of rust, silt and organic matter larger than 5 µm from water.	Color: yellowish brown Density: 0.8 g/cm³ Uniformity coefficient: 1.8 Size: 0.6–1.4 mm Hardness: 4–5 (Mohs scale)	Maximum water temperature: 60 °C Layer height: 60–90 cm (24–36 inches) Layer expansion: 30–40 % Water flow rate in operation mode: 30–50 m/hour and higher Water flow rate in backwash mode: 35–50 m/hour

Item	Name	Description	Physical properties	Conditions of use
40135	MFU FILTER MATERIAL  **30 kg**	Material to create a supporting layer in filter systems, has an alkalizing effect, increases hardness.	2-5 mm fraction	Used as a support layer for filter media.
40108	GRANULAR QUARTZ 2-5 MM WASHED **in bulk**	Material for creating a support layer in filter systems based on quartz rock.		
40209	GRANULAR QUARTZ 0.4-1.2 MM  **25 kg**	Filter material for the removal of suspended solids based on pure quartz rock.	Color: beige to brown Density: 1.6 g/cm³ Size: 0.3–0.9 mm, 1.0–2.0 mm, 3–5 mm Uniformity coefficient: < 1.6 Solubility in acids: 0.3–1.6 %	When used in a supporting layer, the layer height: 10–20 cm When used as a filter material, filter layer height: 60–90 cm (18-30 inches). Layer expansion during flushing: 20 % Water flow rate in operating mode: 4–12 m/hour Water flow rate in backflushing mode: 36–48 m/hour

Item	Name	Description	Physical properties	Conditions of use
40201	WATERWORN QUARTZ 2-5 MM 	Filter material for the removal of suspended solids based on pure quartz rock.	2-5 mm fraction	Used as a support layer for filter media.
40011	ANTHRACITE 	Fossil carbon used as a medium for water treatment of suspended solids and turbidity. The heterogeneous composition of the medium allows the suspended particles to penetrate deeply into its layer. Can be used in multilayer filters, positioned over heavier media, thereby providing pre-filtration.	Color: black. Density: 0,9 g/cm³ Uniformity coefficient: 1.5 Size: 0.6–1.4 mm (type I) Hardness: 3.0–3.8 (Mohs scale) Solubility in acids: less than 1 % Solubility in alkalis: less than 1 %	Layer height: 60–90 cm (24-36 inches), in multilayer filters: 25–45 cm (10–18 inches) Layer expansion: 50% Water flow rate in operating mode: 12 m/hour and higher Water flow rate in backflushing mode: 32–44 m/h

FOR REGULATING THE PH

Item	Name	Description	Physical properties	Conditions of use
40009 **40175**	CALCITE 	Calcium carbonate of natural origin. Most often used to regulate the pH level of water in deferrization systems. During contact with calcite, acidic water slowly dissolves calcium carbonate, raising the pH level. When calcite is used, the hardness increases. It can also be used for water mineralization.	Color: light gray Density: 1.45 g/cm³ Uniformity coefficient: 1.5 Size: depending on application Hardness: 3.0 (Mohs scale). Composition: 95 % $CaCO_3$, 5 % MgCO	PH level: 5.0–7.0 Layer height: 60–75 cm (24–30 inches), Layer expansion: 35–50 % Water flow rate in operating mode: 7.5–15 m/hour Water flow rate in backflushing mode: 20–30 m/hour

FILTER MEDIA FOR IRON AND MANGANESE REMOVAL

Item	Name	Description	Physical properties	Conditions of use
47106	SORBENT AC CATALYST MEDIUM 	Aluminosilicate medium for removal of iron, hydrogen sulfide, strontium, aluminum, petroleum products, phenol, fluorine, etc. Composition: SiO_2– 78 %, MgO 0,5 %, Fe_2O_3 5,0 %, Al_2O_3 7,0 %, others <9.5%. It is especially effective when used together with Sorbent MC. Acts as an oxidation catalyst in reactions between dissolved oxygen and iron compounds. Regeneration does not require the use of any chemical reagents. The pellets are not treated with chemically active coatings based on manganese or other catalytically active metal.	Color: beige to brown Bulk density: 0.5 g/cm^3 Size: 0.3–0.9 mm, 1.0–2.0 mm, 3–5 mm Uniformity coefficient: < 1.6 Solubility in acids: 0.3–1.6 %	When used in a supporting layer, the layer height: 10–20 cm When used as a filter media, filter layer height: 60-90 cm (18-30 inches). Layer expansion during flushing: 20 % Water flow rate in operating mode: 4–12 m/hour Water flow rate in backflushing mode: 18–20 m/hour
40062	GREENSAND PLUS CATALYTIC MEDIUM 	Filter medium to remove dissolved iron, manganese and hydrogen sulfide. Quartz sand coated with manganese dioxide. It is a replacement for MGS. It can be used with both periodic and permanent regeneration schemes. Regeneration requires 1.5–2 grams of potassium permanganate per 1 liter of material.	Color: black Density: 1.36 g/cm^3 Uniformity coefficient: 1.6 Size: 0.25–1.0 mm	Operating pH range: 6.2– 8.5 Maximum water temperature: 38 °C Two-layer loading: anthracite: 40–90 cm (15–36 inches), GreensandPlus: 40–60 cm (15–24 inches) Layer expansion: minimum 40% Water flow rate in operating mode: 5–12 m/hour Water flow rate in backflushing mode: min. 30 m/h Requires pre-soaking in potassium permanganate solution.

Item	Name	Description	Physical properties	Conditions of use
40018	PYROLOX CATALYTIC MEDIA  	Iron, manganese and hydrogen sulfide removal, manganese dioxide based ore material. Hydrogen sulfide, iron and manganese are oxidized, trapped by the medium layer, and then washed out of it during backflushing. The use of additional chemicals during regeneration is not required. Preferably used in conjunction with aeration, chlorination, ozonation and other additional treatment methods. Requires significant water flows when backflushing. Does not work well in the presence of tannins.	Color: Black Density: 2.0 g/cm³ Uniformity coefficient: 1.7 Size: 0.85–2.4 mm	Operating pH range: 6.5–9.0 Layer height: depending on application. Layer expansion: 15–30 % Speed in operating mode: 12 m/hour Speed in backflushing mode: 60–74 m/hour
40279	PYROLOX ADVANTAGE FILTER MEDIA  	Media for the removal of iron, manganese, hydrogen sulfide on a light basis with the application of manganese dioxide.	Color: black Light analogue of Pyrolox, bulk weight 1.35 kg/l. Pyrolox Advantage=Filter Ox	Operating pH range: 6.5–8.5 Minimum contact time with empty media: 4 minutes Speed in backflushing mode: 42–63 m/hour

Item	Name	Description	Physical properties	Conditions of use
40275	MANGALOX 	A natural manganese dioxide-based filter media with strong catalytic and filtering properties.	Color: Black (with purple tint). Fraction, 0.5-1.5 mm Bulk weight, 1.56 g/cm³ Density, 4.4-5.2 g/cm³ Uniformity coefficient: 1.7 Wearability: 0.1% per year Filtration rate, 15-30 m/h Backflushing speed, 30-60 m/h pH range 5.8-8.6	It is used in water treatment for reagentless deferrization, demanganation and hydrogen sulfide removal.

Item	Name	Description	Physical properties	Conditions of use
47145	SORBENT MC CATALYST MEDIUM 	Aluminosilicate medium for iron and manganese removal. It is especially effective when used together with Sorbent AC. Acts as an oxidation catalyst in reactions of mutual action of dissolved oxygen with iron (II) compounds. Hydrogen sulfide and manganese are also oxidized and trapped by the filter layer. Regeneration does not require the use of any chemical reagents. The pellets are not treated with chemically active coatings based on manganese or other catalytically active metal.	Wearability: 0.01% Grindability: 0.19 % Intergrain porosity: 46-49% Bulk density: 1.35-1.4 g/cm³ Uniformity coefficient: 1.6–1.8 Size: 0.3–0.7; 0.7–1.4 mm	Works with all types of oxidizing agents and pH less than 6.0 Increases water pH by 2.5-3.0 points. Layer height: 40–100 cm Filtration rate: 10–15 m/hour Flushing rate at 30–35% expansion: 28–30 m/h
40015	BIRM CATALYTIC MEDIA 	Synthetic filter media for removing dissolved iron. It acts as a catalyst for the oxidation reaction of iron compounds by air oxygen, which saturates the water during pre-aeration. Does not require chemicals for restoration. Can also be used to remove manganese, but the pH of the water must be maintained between 8.0 and 9.0. If the water contains iron compounds in addition to manganese, the pH should not exceed 8.5. Does not work well with high levels of organic compounds and free chlorine (>0.5 mg/l), as well as in the presence of petroleum products, sulfides, hydrogen sulfide, polyphosphates.	Color: black. Density: 0.7–0.9 g/cm³ Uniformity coefficient: 1.96 Size: 0.42–2.0 mm	Operating pH range: 6.8–9.0 Removes up to 5 mg/l of iron and up to 1 mg/l of manganese Maximum water temperature: 38 °C Layer height: 75– 90 cm (30–36 inches). Layer expansion: 35–50 %. Water flow rate in operating mode: 8–12 m/hour Water flow rate in backflushing mode: 24–29 m/hour Bicarbonate alkalinity should be twice the sum of sulfate and chloride concentrations

Item	Name	Description	Physical properties	Conditions of use
40149	ECOFER  **25 l**	Granular catalytic aluminosilicate filter material made from natural raw materials. For restoration of its filtering capacity (regeneration) no chemical reagents are required: backflushing with water is sufficient.	Filter material for filtration of fine and colloidal impurities, dissolved iron. Fraction 0.7–2 mm When water passes through the load as a result of catalytic oxidation, iron Fe2+ and manganese Mn2+ form a sediment (iron and manganese hydroxides), which is retained in the thickness of the media and is easily removed from it during system flushing (regeneration).	It is used in pressure and non-pressure water treatment systems. Works effectively in systems with oxidation of iron and manganese with oxygen, ozone, chlorine, etc.
40194	ZEOLITE  **25 kg**	It is used for loading of deferrizers and water demanganization when the concentration of nitrogen compounds is exceeded together with Sorbent AC and Sorbent MC.	The mineral is notable for its adsorbing properties. The zeolite sorbent has the following properties: Adsorptive – it can absorb and return different substances. Ion-exchange – it can exchange cations. Catalytic – the mineral is able to accelerate chemical reactions. (fraction 0.7-1.5 mm)	The medium is particularly effective for wastewater treatment of nitrogen-containing elements.

ION EXCHANGE RESINS

Item	Name	Description	Physical properties	Conditions of use
40089	ION EXCHANGE RESIN PURESIN PC002 	Strongly acidic cation exchange resin for water softening based on polystyrene. Removes calcium and magnesium ions from water, replacing them with sodium ions. After depletion of the tank should be subjected to regeneration with a solution of table salt. In addition to hardness salts, iron and manganese salts can be removed with resin. Base: styrene and divinylbenzene copolymer. Functional groups: $R–SO_3^-$	Physical form: light spherical pellets Ionic form on delivery: Na+ Total exchange capacity: minimum 1.9 eq/l (Na+form) Maximum operating temperature: 150 °C Moisture content: 45–50% Bulk weight: 770-870 g/l Average pellet size: 0.315–1.25 mm Fine granule content: <0.3 mm–<1.0% Coarse granule content: >1.2 mm–< 5.0% pH range: 0 — 14 Food grade.	Operating speed: 10–25 m/h Layer height: minimum 60 cm Expansion: 25–50% Regenerant: NaCl Dose of regenerant: 112–300 g/l Concentration: 4–6 % Regenerant flow rate: 4–12 m/h
40153	ION EXCHANGE RESIN TC007FG (NA+) 	TC007FG high quality gel cation exchange resin. It has a high ion-exchange capacity and good physical and chemical stability. Successfully used in domestic and industrial water softening and demineralization systems for the preparation of pure and extra pure water.	Structure of the polymer matrix: styrene-divinylbenzene Functional group: sulfogroup Appearance of pellets: spherical pellets Ionic form: Na+ Total exchange capacity, 1.900 eq/l. Moisture content, %: 45-55 Bulk weight, g/ml: 0.77-0.87 Pellet size, mm: 0.3-1.2 Number of non-standard particles: >1.2 mm <1% < 0.3 mm <1% Degree of swelling at Na— H transition, %: 7-10 Food grade.	Maximum allowable operating temperature, °C 120 pH range: 0-14 Minimum loading height, mm: 600 Expansion of the ion-exchange resin layer during backflushing, %: 50-80 Passage of ripping water with speed, m/h: 7-15 Regenerants: NaCl Consumption of 100% regenerant, g/l: 80-150 Concentration of sodium chloride solution, %: 8-12 Passage of regeneration solution of sodium chloride and washing water at the rate, m/h, min: 3-5 Contact time, min: 30-60 Minimum filtration rate of treated water, m/h: 5

Item	Name	Description	Physical properties	Conditions of use
40238	PURESIN TC007HG ION EXCHANGE RESIN (NA+)  	Strongly acidic cationite (SAC) improved gel type in Na-form.	Structure of the polymer matrix: styrene-divinylbenzene Functional group: sulfogroup Appearance of pellets: spherical pellets Ionic form: Na+ Total exchange capacity, 1.900 eq/l. High grade.	Maximum permissible operating temperature, °C 120 pH range: 0-14 Minimum loading height, mm: 600 Expansion of the ion-exchange resin layer during backflushing, %: 50-80 Passage of ripping water at speed, m/h: 7-15 Regenerants: NaCl Consumption of 100% regenerant, g/l: 80-150 Concentration of sodium chloride solution, %: 8-12 Passage of sodium chloride regeneration solution and wash water at a rate, m/h, at least: 3-5 Contact time, min: 30-60 Minimum filtration rate of treated water, m/h: 5
40241	PURESIN TC007E ION EXCHANGE RESIN (NA+)  	A technical-grade strong acid cationite (SAC) of the gel type in Na-form. Used for water softening.	The total exchange capacity is 1,800 mg-eq/L. Industrial grade.	

FOR REMOVAL OF NITRATES FROM WATER

Item	Name	Description	Physical properties	Conditions of use
40055	PUROLITE A-520E ION EXCHANGE RESIN 	A macroporous anion exchange resin that is specifically designed for nitrate removal. Base: styrene and divinylbenzene copolymer. Functional groups: quaternary ammonium. High nitrate selectivity even against the background of moderately high sulfate content in water. The preferred reagent for regeneration is NaCl. Before use, it is recommended to treat with a 6% NaCl solution of at least two volumes of resin, and then rinse with water of at least four volumes of resin.	Physical form: opaque spherical pellets. Ionic form on delivery: Cl– Total exchange capacity: minimum 0.9 eq/l (Cl– form) Maximum operating temperature: 100 0C Moisture content: 45–52% Bulk weight: 680 g/l Average size: 0.3–1.19 mm pH range: 0–14	Operating flow rate: 8–32 m/h Layer height: minimum 70 cm Layer expansion: 50–75 % Regenerant: NaCl Dose of regenerant: 90–250 g/l Concentration: 3–10% Regenerant flow rate: 2–8 m/h Duration of regeneration: 20–60 minutes

FOR THE REMOVAL OF ORGANIC COMPOUNDS FROM WATER

Item	Name	Description	Physical properties	Conditions of use
40054	A860 ION EXCHANGE RESIN 	It is a macroporous strongly anion-exchange resin of type I based on acrylates. Functional groups: quaternary ammonium. Anionite is used to remove organic compounds (so-called 'scavenger'). Able to remove weak acids such as carbonic and silicic acids. When used in combination with polystyrene-based resins (e.g. in mixed layers), a wider range of organic substances can be removed than when used alone.	Physical form: matte white spherical pellets Ionic form on delivery: Cl– Total exchange capacity: minimum 0.8 eq/l (Cl– form) Maximum operating temperature: 40 °C Moisture content: 66–72% Bulk weight: 680–715 g/l Average size: 0.3-1.2 mm The content of fine pellets: < 0.3 mm–1.0% maximum Content of coarse pellets: > 1.2 mm-5.0 % maximum pH range: 0–14	Operating flow in operating mode: 5-–50 m/h Layer height: minimum 80 cm Regenerant: NaCl Dose of regenerant: 160–300 g/l Concentration: 10 % NaCl Regenerant flow rate: 1–10 m/h

Item	Name	Description	Physical properties	Conditions of use
40088	ION EXCHANGE RESIN PURESIN PA001 	Acrylate-based strong-base macroporous anionite (SBA) type I. It is used to desalinate water with high organic content, as well as an organosorbent (scavenger).	Physical form: white spherical pellets. Ionic form on delivery: Cl– Total exchange capacity: minimum 0.8 eq/l (Cl– form) Maximum operating temperature: 60 °C Moisture content: 65–75 % Bulk weight: 650–720 g/l Average size: 0.3-1.2 mm The content of fine pellets: <1.0% maximum Content of coarse pellets: > 1.2 mm – 5.0% maximum pH range: 0–14	Operating flow in operating mode: 10–20 m/h Layer height: minimum 60 cm Regenerant: NaCl Dose of regenerant: 160–300 g/l Concentration: 8–20% NaCl Regenerant flow rate: 1–5 m/h

Item	Name	Description	Physical properties	Conditions of use
40231	RA202 NITRATE-SELECTIVE ANION-EXCHANGE RESIN 	Macroporous anionite for selective removal of nitrates in drinking water on a polyacrylonitrile matrix.	Cl – form Capacity 800 mg-eq/L	Operating flow rate: 8–32 m/h Layer height: minimum 70 cm Layer expansion: 50–75 % Regenerant: NaCl Dose of regenerant: 90–250 g/l Concentration: 3–10% Regenerant flow rate: 2–8 m/h Duration of regeneration: 20–60 minutes
40249	RA510 ANION-EXCHANGE RESIN 	Macroporous strongly basic anion exchange resin (SBA) on a polyacrylic matrix in CL-form. Designed to remove organic matter (scavenger).	Cl – form Capacity 800 mg-eq/L	Flow rate in operating mode: 10–20 m/h Layer height: minimum 60 cm Regenerant: NaCl Dose of regenerant: 160–300 g/l Concentration: 8-20% NaCl Flow rate of the regenerant: 1–5 m/h

Item	Name	Description	Physical properties	Conditions of use
40150	TA213D (CL) ANION-EXCHANGE RESIN  25 l	Macroporous strongly basic anion exchange resin (SBA) on a polyacrylic matrix in CL-form. Designed to remove organic matter (scavenger).	Cl – form Capacity 800 mg-eq/L	Flow rate in operating mode: 10–20 m/h Layer height: minimum 60 cm Regenerant: NaCl Dose of regenerant: 160–300 g/l Concentration: 8–20% NaCl Flow rate of the regenerant: 1–5 m/h
40258	TA306D (TA201D) ANION EXCHANGE RESIN  25 l	TA201D is a macroporous strongly anion-exchange resin of premium type I with a polystyrene matrix and a functional quaternary amine (trimethylamine) group with a standard Gaussian size distribution. Its macroporous structure allows it to adsorb soluble organic molecules and resist osmotic and mechanical shock and oxidation. TA201D in chloride form can remove both strong and weak acid radicals such as sulfates, nitrates, arsenates, chromates and silicates to extremely low concentration levels.	Supplied in Cl-form. Total exchange capacity ≥1200 mg-eq/l Moisture content - 50-60% Fraction 0.315-1.25 mm ≥95% Bulk density - 0.65-0.73 kg/l In combination with a strongly acidic cation exchange resin (in hydrogen form), TA201D in hydroxide form can be used in all types of demineralization systems, especially suitable for high-speed polishing and high-temperature polishing.	Water demineralization (deionization), removal of acid radicals. Maximum operating temperature 60 °C pH range: 0–14 Working filtration rate 8-40 OS/h Regenerant: 2-10% NaCl, 2-6% NaOH

Item	Name	Description	Physical properties	Conditions of use
40259	TA306D (TA301D) ANION EXCHANGE RESIN 	TA301D is a premium, macroporous, low-base anion-exchange resin with a polystyrene matrix and a tertiary amine (dimethylamine) functional group with a standard Gaussian size distribution. Its macroporous structure allows it to adsorb soluble organic molecules and resist osmotic and mechanical shock and oxidation. The weak-base functionality makes the TA301D easy to regenerate, even with alkaline waste left over from the regeneration of the strong-base anionite.	Supplied in the form of a loose base. Total exchange capacity ≥1450 mg-eq/l Moisture content - 45-58% Fraction 0.315-1.25 mm ≥95% Bulk density – 0.65-0.72 kg/l	Water demineralization (deionization), removal of strong acids. Maximum operating temperature, 60oC pH range: 0–9 Working filtration rate 5-40 OS/h Regenerant: 2-4% NaOH, 2-4% HCl TA301D can be used in multilayer demineralizers to extend the life of the high-base anion resin and prevent its organic contamination in the treatment of chromiferous wastewater.
40260	PC201FD-P (PMB101) RESIN BLEND 	PMB101 is a high-capacity mixed ion exchange resin consisting of a mixture of a gel, a highly basic Type I anion exchange resin and a highly acidic cation exchange resin for direct water treatment. Specific resistance of water at the outlet is more than 15 MOhm. It is suitable for use in regenerable and non-regenerable cartridges, for deionization with high silica removal efficiency and for cleaning water for household appliances.	Supplied in H+ / OH- ionic form. Total exchange capacity: Cationite – 2000 mg-eq/l Anionite – 1300 mg-eq/l Moisture content: Cationite – 50-56% Anionite – 53-60% Fraction 0.3-1.2 mm <0.3 mm – 1% >1.2 mm – 5% Bulk density – 0.70-0.78 kg/l	Water demineralization (deionization). Maximum operating temperature 60 °C pH range: 0–14
40208	BORSELECTIVE ANIONITE PS470 	Macroporous chelating resin designed for selective removal of boron from aqueous solutions due to the chelating effect.	With excellent exchange reaction kinetics, the ion exchange resin efficiently absorbs boron in a wide concentration and pH range under various operating conditions.	It is used as a second stage of boron removal after reverse osmosis, without regeneration or with regeneration by acid or alkali.

WATER TREATMENT REAGENTS

Item	Name	Description	Properties, features
41001	POTASSIUM PERMANGANATE 	Potassium permanganate ($KMnO_4$) — is potassium permanganate, the potassium salt of manganese acid. Strong oxidizing agent. A concentrated solution of potassium permanganate is colored intensely purple, while the diluted solution is pink. IS NOT A PRECURSOR	Appearance: dark violet crystals with metallic luster Density – 2.703 g/cm³ Solubility in water: at 20 ° C – 6.36 g per 100 grams of water, at 40 ° C – 12.5 g per 100 g of water, at 65° C – 25 g per 100 g of water Decomposition temperature: 240 ° C It is not hydrolyzed, slowly decomposes in solution
41031	SODIUM HYPOCHLORITE 	Sodium hypochlorite NaClO (GOST 11086-76) grade "A" – oxidizer. Permitted for disinfection of drinking water, disinfection and bleach. It is a greenish-yellow liquid with an active chlorine content of at least 190 g/l. Used in systems of deferrization and disinfection of water with Quantum DMI-65, sorbent AC, sorbent MC, sorbent MCK.	Appearance – a liquid of greenish-yellow color. Light transmission coefficient – minimum 20% Mass concentration of active chlorine — minimum 190 g/l Mass concentration of alkali in terms of NaOH: 10–20 g/l Mass concentration of iron – minimum 0.02 g/l
41019	BACTERICIDAL RESIN CLEANER (BOS) 	The bactericidal purifier is designed to purify the ion-exchange resin granules from oxidized iron, its bactericidal treatment, removal of sediments from the filter control unit valve. The bactericidal resin purifier is added to the brine solution manually or automatically by means of a special dispenser installed in the brine tank.	Use with an automatic dosing feeder. Items: **34113** **34114** 
35867 **35868**	GEYSER AQUATORIN COAGULANT 0.5 KG/1.5KG 	Geyser Aquatorin (0.5kg or 1.5kg) is a coagulant for drinking water purification with a mass fraction of aluminum oxide (AL2O3) of 30%. Advantages: -technological activity practically does not depend on the temperature of the treated water; -does not form toxic substances in water, air and soil; -has a long shelf life; -does not flake in storage; -does not require heated storage warehouses and premises; -easy to use, quickly and easily dissolved in water; -allows for precise dosing.	Shelf life is 3 years. Methods for preparing a working solution of coagulant (per 1 kg): dissolve 1 kg of dry coagulant in 1 liter of filtered water; wait for the solution to lighten (about 8 hours); add 8 liters of filtered water; stir the solution vigorously.

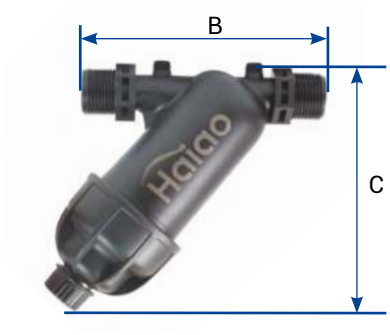
Item	Name	Description	Properties, features
47139	COAGULANT SKIF–180  **25 kg**	An effective coagulant based on aluminum polyoxychloride with a flocculant added, which accelerates and activates the coagulation (flocculation) process of water impurities.	Mass fraction of aluminum oxide (Al_2O_3):12–17 % Mass fraction of chlorine (Cl^-): 16-24 % Mass fraction of cationic flocculant FL-45: 9.4 % Physical condition: slightly yellow colored liquid Active pH reaction: 0.5-3 Ionic nature: cationic
41024	REAGENT AMINAT KO–2  **22 kg**	The reagent is an aqueous solution based on catalyzed sodium bisulfite. Designed to prevent oxygen corrosion in closed heating systems and closed cooling circuits. Binds dissolved oxygen and promotes the formation of a protective film. A special catalyst increases the recovery rate, allowing dissolved oxygen to be completely removed from the feed water. As the temperature increases, the efficiency of the reagent increases.	Maximum use temperature of the reagent: 250 °C Reagent consumption is set depending on the concentration of dissolved oxygen and varies from 5 to 100 mg/l. Dosing is controlled by maintaining the SO_3^{2-} – excess in boiler water at 20-40 mg/l It is recommended to dose the reagent in diluted form with a multiple of 4–10 times Non-flammable, not explosive
41025	REAGENT AMINAT KO–5  **22 kg**	The reagent is an alkaline solution of an inorganic complex-forming agent. Designed to adjust the pH value of the feed water of steam boilers.	Reagent consumption is set depending on the initial and desired quality of treated water (pH and alkalinity values) and can range from 10 to 200 mg/l The reagent is dispensed in diluted form: a dilution factor of 5 to 20 Dosing is controlled by the pH value of the treated water Non-flammable, not explosive
41039	REAGENT AMINAT DM–56  **20 kg**	Acidic detergent for washing inorganic salts, including iron-containing deposits from the surface of membrane elements. It is an aqueous solution of a mixture of organic and inorganic acids.	Colorless or light yellow liquid. Product freezing temperature is -4°C. Frozen product restores its properties after thawing and stirring. Reagent consumption is 40 ml per 1 liter of working solution. To prepare the working solution, the reagent is diluted with permeate. pH of the working solution is about 2.3. The optimum temperature range is 30-35°C, but no more than 40°C. The control of the washing process is carried out by measuring the pH of the washing solution. Washing is considered complete when the pH of the washing solution reaches a constant value.

Item	Name	Description	Properties, features
41010	REAGENT AMINAT DM–50 	Alkaline detergent for removing silicon, biological and organic impurities. It is an aqueous solution of sodium hydroxide containing organic complexing agent. Recommended for washing reverse osmosis membrane elements and basic food processing equipment.	Colorless transparent liquid Alkalinity of the product: 0.9–1.0 mg-eq/ml Density: 1.10–1.15 g/cm³ pH 11.0–11.25 The treatment process is more efficient if carried out at a higher temperature Optimal range – not more than 35°C Control of the washing process by measuring the pH value of the washing solution
41012	REAGENT AMINAT K 	Sediment inhibitor. Extends the service life of coiled membranes by significantly reducing the deposition of calcium and magnesium salts – carbonates, sulfates and phosphates. It is a composition of aqueous solutions of sodium salts of methyliminodimethylphosphonic and nitriltrimethylphosphonic acids of special purification. The preparation is fed with water to the inlet of the membrane device, but does not pass through the cells of the membranes and is discharged into the drain.	Light yellow liquid Mass concentration of phosphonates converted to PO_4^{3-}: > 250 g/dm³ Mass concentration of phosphoric acid converted to PO43–: < 20 g/dm³ Density: within 1.20–1.30 g/cm³ pH: 5.0–7.0 Non-flammable, fire and explosion-proof, low-hazard, non-cumulative, has no effect on organoleptic properties of water and biochemical oxygen consumption

DISC FILTERS

Disc filters are designed to purify water, as well as other liquids from mechanical impurities (sand, silt, etc.). The filtering element in these filters is a packet of discs made of polymeric materials. The surface of each disc has trapezoidal grooves on both sides, of a certain depth and width. When the discs in the pack lie free, the grooves of neighboring discs form grooves of the original (largest) cross-section. When the disk pack is compressed, these grooves change shape (the grooves in adjacent disks do not coincide completely or do not coincide), and their cross-sections are reduced. As a result, a complex volumetric fine-mesh structure is formed, trapping solid particles.
The number of disks, the shape of the grooves, the value of compression of the disks, i.e. the degree of distortion of the shape of the grooves, are chosen so that solid particles will be retained by tightly compressed disks, and filtered water will flow inside the disks.
To flush, the bag is removed, the discs are unclenched, and the grooves are returned to their original state, releasing the trapped particles, which are easily flushed away. In systems with automatic flushing, this process is performed without disassembling the filter housing.
The disc pack is attached to the filter housing and enclosed by a high-pressure, high-strength plastic shroud. The shroud and housing are sealed with a gasket.

HAIAO DIAGONAL DISC FILTER



Specifications:

Parameters	
Housing material	Corrosion and chemical resistant material
Filter disc material	plastic
Maximum operating temperature, 0C	+5...+50
Maximum operating pressure, atm	8

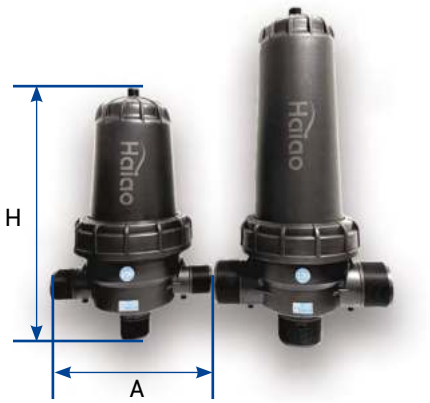
A series of portable filters of relatively small capacity. To flush the disc elements, remove them from the filter housing. There is a drain fitting at the bottom of the filter.

Item	Name	Connecting dimensions, inch	Dimensions, HxC mm	Filtration area, cm²*	Max. capacity, m³/h	Filtration fineness, µm
32743	HF-Y¾	¾	166,7 × 172,3	83,9	4,0	130
32739	HF-Y1	1	166,7 × 172,3	83,9	5,0	
32744	HF-Y1½	1½	264,0 × 238,9	142,8	15,0	
32745	HF-Y2	2	264,0 × 238,9	142,8	22,0	

* With a filtration fineness of 100 µm

HAIAO T-DISC FILTER

Designed to purify water from sand, silt, rust and other large impurities in flowing water.
As the filter gets clogged, the compression disc cylinder should be flushed, which is done by simply disassembling it and rinsing it with a brush. After that, the filter is ready for use again.
This model can be used for all mechanical purification needs, from domestic use to large-scale industry.



Item	Name	Connecting dimensions, inch	Dimensions, HxA mm	Filtration area, cm²*	Max. capacity, m³/h	Filtration fineness, µm
32740	HFT-2	2	495,1 x334,2 diameter 232,8	1060	30	130
32741	HFT-3	3	642,1 x333,7 diameter 232,8	1060	50	

*With a filtration fineness of 130 µm

HAIAO FILTRATION SYSTEMS

A series of industrial filters of medium and high capacity.
The process of disk flush filters can be conditionally divided into two stages:
Filtration process: the feed water enters the filter through the inlet manifold, the discs are compressed by the cap on the top side of the disc cartridge. Water passes from the outside of the pack through the recesses in the discs, where the remaining dirt accumulates.
Flushing process: The direction of water flow is reversed. Water enters the filter through the outlet manifold, passes inside the disc cartridge, overcoming the resistance of the spring compressing the discs, lifts the cartridge cap. The disc package is unclenched. The water that enters the space between the uncompressed discs cleans them of impurities and flows into the inlet manifold.
When the purification cycle ends, the water is switched to direct flow, the hood compresses the discs and filtration continues. Next, the next filter in the line begins to be flushed.
It is not necessary to remove the disc elements from the filter housing to flush them. The filters are flushed with a water flow in the opposite direction.

Item	Name	Connecting dimensions, inch	Dimensions, HxA mm	Max. capacity, m³/h	Filtration fineness, µm
32751	HF-A2-1-2	2	1244 × 697	15	130
32750	HF-A2-2-3	2	1148 × 781	30	

*With a filtration fineness of 130 µm

Based on these filters, systems of different capacities with automatic flushing of disc elements are built. Flushing is carried out automatically by switching three-way hydraulic valves at the signal of the programmable controller.
Units with a capacity of up to 597 m³/h are manufactured as standard.
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HAIAO DISC FILTER BOWLS

Item	Name	Size, inch	Dimensions, HxA mm	Filtration surface, cm²*	Max. capacity, m³/h*	Filtration fineness, µm
32748	Bowl for disc filter 2" HF-A2	2	732x331	1500	25	130
32749	Bowl for disc filter 2" HF-A2	2	732x331	1500	25	50
32746	Bowl for disc filter 3" HF-A3	3	740x354	1500	35	130
32747	Bowl for disc filter 3" HF-A3	3	740x354	1500	35	50

MULTI-CARTRIDGE FILTERS

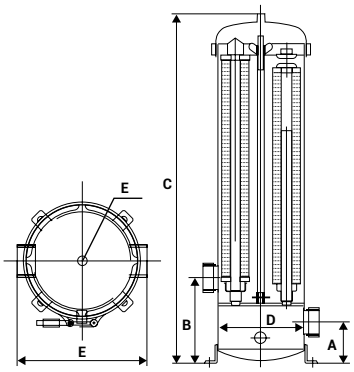
The HPCF filter housing is designed for Slim Line 10" and Slim Line 20" cartridges. The housing is designed for pressure operation and installation at the inlet of the cold water supply system.

Specification/Model	HPCF-5x20SL	HPCF-5x30SL	HPCF-5x40SL	HPCF-9x30SL	HPCF-9x40SL
Material	UPVC				
Maximum operating pressure, MPa	0,6				
Operating temperature range, °C	5-45				
Dimensions ØxH, mm	225 × 715	225 × 965	225 × 1215	315 × 995	315 × 1245
Overall dimension W by fittings, mm	473	473	473	570	570
Capacity at 5 µm, m³/h	5	7,5	10	13,5	18
Inlet/outlet, mm	DN50	DN50	DN50	DN80	DN80
Number of Slim Line 10" cartridges, pcs.	10	15	20	27	36
Item	50698	50699	50700	50701	50702

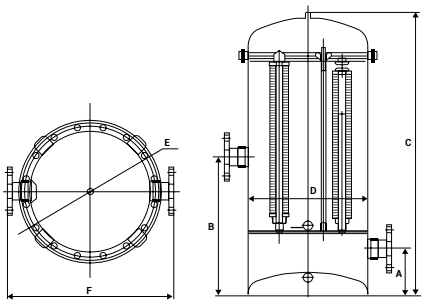
MAGISTRAL S

The housing is designed for installation of removable filter cartridges for fine purification of hot and cold water from insoluble (mechanical) impurities: dirt, rust, silt, sand, etc.

5 x 20SL
5 x 30SL
5 x 40SL



11 x 30SL
11 x 40SL



Specifications:

Parameters	5 x 20SL	5 x 30SL	5 x 40SL	11 x 30SL	11 x 40SL
Item	90552	90823	90824	90825	90554
Required number of 10xSL cartridges*	10	15	20	33	44
Material	SUS304/SUS316L				
Maximum operating pressure, MPa	0,7				
Operating temperature range, °C	1-90				
Overall dimensions					
A (mm)	120			150	
B (mm)	220			600	800
C (mm)	860	1110	1360	1170	1420
D (mm)	Ø200			Ø300	
E (mm)	Ø248			Ø360	
F (mm)	260			440	
Inlet / Outlet	1" - 1 1/2"	1" - 2"		2" - 3"	
Drain	1/4"- 1/2"			1/2"	

* To connect two cartridges, you need the SL Coupler (item 50611)

BAG-TYPE MAINLINE FILTERS

Bag-type filters are designed to purify water and other liquids from suspended impurities (sand, silt, rust). Filter housings are made of 12X18H10T stainless steel. The large size of the housings and the bag type of the filter element determine their high performance and dirt holding capacity.
Filter bags are made of polyester (for cold and hot water) and can be used repeatedly. Regeneration of the bag is done by washing with soap or powder. If heavily soiled, the filter bag should first be soaked in a 5-10% solution of hydrochloric, citric or acetic acid. Bags are available in a choice of porosity 1, 3, 5, 10, 25, 50, 100 µm.

GEYSER–4CH AND GEYSER–4CH–20BB FILTERS

The filter housing consists of a base and a cover connected with a clamp. The filter bag is inserted into the stiffener frame. It is closed at the top with a frame cover and clamped with a holder. The filter kit includes a bracket for placing it on the wall. The bottom drain allows you to safely drain residue from the housing and makes filter maintenance easier.

Specifications:

Specification/Model	Geyser–4CH	Geyser–4CH–20BB
Capacity with 1 µm bag, m³/h	0,5/0,7	1,0/1,3
Capacity with 100 µm bag, m³/h	3,0/4,0	4,5/6,0
Diameter/distance between spigots, mm	142/175	142/175
Height, mm	390	620
Connecting dimensions, inch	1	1
Operating pressure, atm	6	6
Item	32100	32112

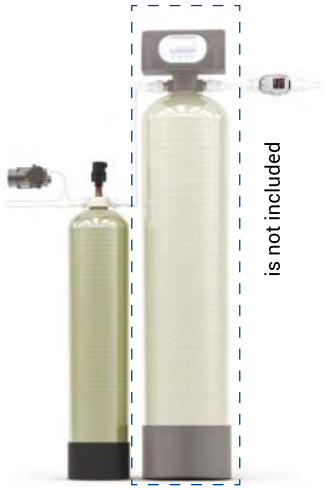
GEYSER–8CHN FILTER

The filter consists of a housing and a cover connected by a clamp. There is an air separator on the cover to bleed air from the filter when it is filled with water and to relieve pressure when the filter is disassembled.
A stiffener frame is lowered into the housing on the support ring, into which the filter bag is inserted.

Specifications:

Specification/Model	Geyser–8CH
Capacity with 1 µm bag, m³/h	2,0/2,5
Capacity with 100 µm bag, m³/h	8,6/12,0
Diameter, mm	300
Height, mm	1100
Connecting dimensions, inch	1 ½
Operating pressure, atm	7
Item	32113

AERATION BLOCKS



The aeration unit is designed to saturate the treated water with oxygen in order to oxidize the dissolved iron it contains. Can be used before filters with catalytic media (Birm, Pyrolox, etc.).

The aeration unit consists of: aeration tower, compressor, flow switch DSK-5, air valve and adapter. The water-air mixture is fed to the aeration tower, where the water and air are separated. Water enters the filter with a catalytic medium, air is separated through an air valve.

DSK-5 flow switch is installed in the output line of the filter and connected to an external 220 V power supply, and the compressor is connected to the relay. If there is water flow in the line, the relay switches on the compressor. If there is no water flow, the relay shuts down the compressor.

Specifications:

Specification / Model	08 × 44	12 × 52
Unit capacity, working/peak, m³/hour	0,9 / 1,5	1,5 / 2,5
Maximum compressor capacity, l/h	420	420
Maximum water back pressure, atm	5	5
Aeration tower dimensions, mm	250 × 1100	300 × 1300
Flow switch threshold, l/min	3	3
Power consumption, W	300	300
Item	34597	34999

* On request we complete aeration units with capacity up to 10m³/h

AERATION TOWERS

Typical Size	08 × 44	10 × 54	12 × 52	14 × 65	16 × 65	18 × 65	21 × 65	24 × 62	30 × 72	36 × 72
Dimensions – diameter × height, mm	205 × 1200	260 × 1460	310 × 1420	370 × 1760	410 × 1720	490 × 1740	555 × 2080	610 × 2180	780 × 2160	930 × 2170
Working/peak capacity, m3/hour	0,9/1,5	1,2/2,0	1,5/2,5	2,5/4,0	3,5/5,5	4,5/7,5	5,5/8,5	7,0/10	10/15	15/20

COMPRESSORS

AF1-100

AF1-100 air compressors (oil-free) as well as KK8 and KK15 are designed to pressurize air into pressurized pipes and can be used in modern pressurized water aeration systems. The compressors have a monoblock design (a single unit with a single-phase AC motor). Equipped with thermal overload protection that shuts down the electric motor. When normal conditions are restored, the electric motor starts automatically. Compressors have electrical outputs for connecting an external control device (e.g. a relay).

Specifications:

Specification / Model	AF1-100
Rated compressor capacity at 5 bar back pressure, l/min	15
Maximum water back pressure, bar	7
Power supply voltage, V	220±5 % (50 Hz)
Power, W	230
Outlet (discharge) diameter, inch	1/4
Item	36972

KK8 A-025

Specifications:

Specification / Model	KK8 A-025
Compressor capacity at 0 bar, l/min	25
Rated pressure, bar	7
Power supply voltage, V	230 (50 Hz)
Power, W 220	220
Outlet (discharge) diameter, inch	1/8
Item	39015

KK15 A-061

Specifications:

Specification / Model	KK15 A-061
Compressor capacity at 0 bar, l/min	60
Rated pressure, bar	7
Power supply voltage, V	230 (50 Hz)
Power, W 220	540
Outlet (discharge) diameter, inch	1/8
Item	39014

AS-18-2 AND AS-19-2

AS-18-2 and AS-19-2 compressors manufactured in China are designed for pressurizing air in the aeration towers of the deferrient-free deferrization systems. Features: ability to adjust operating pressure and automatic pressure regulator that turns compressor off when pressure is exceeded.

Specifications:

Model	AS-18-2
Type	Single-cylinder piston
Power supply, V/Hz	220/50
Electric power, W	123
Maximum pressure, atm	4,0
Air performance under normal conditions, l/min	20-23
Connecting dimensions, inch	1/4 "
Weight, kg	3,6
Overall dimensions, mm	255 × 135 × 170
Item	35955

Model	AS-19-2
Type	Two-cylinder piston
Power supply, V/Hz	220/50
Electric power, W	185
Maximum pressure, atm	5,5
Air performance under normal conditions, l/min	35-40
Connecting dimensions, inch	1/4 "
Weight, kg	5,5
Overall dimensions, mm	320 × 135 × 205
Item	35956

WATER DISINFECTION UNITS

The most common method of combating bacteriological contamination (the presence of microbes and bacteria in the water) is water UV exposure. The exposure parameters are chosen in such a way as to guarantee almost complete sterilization of the water. As sterilizers of this type, special ultraviolet lamps, mounted in a rigid housing, inside which water flows, exposed to ultraviolet radiation, are widely used.

TOP AQUA

Top Aqua units are designed to disinfect water with ultraviolet radiation with a wavelength of 253.7 nm. The advantages of this type of water disinfection is that algae, fungi, bacteria and viruses are killed during treatment: there is no side effect, no toxic substances are formed, the water composition is not changed. The units are very easy to use and come at a low price. The units use low-pressure Philips mercury discharge lamps. Optimal wavelength of radiation is provided by a special coating of the inner surface of the lamp. A special starter built into the lamp allows it to reach its operating characteristics in the shortest possible time after switching on. The units are an AISI 304 stainless steel tube with nozzles, inside which is placed the transmitter in a glass cover. The control unit is equipped with an LCD display and can be built-in or external. A visual and audible alarm warns you of a system malfunction. Power supply is AC 220 V, 50 Hz. Replacement lamp life is 8000 hours.

Requirements for water supplied to the units:

Parameters	
Water temperature, ˚C	+2...+45
Iron, ppm (mg/l)	<0.3 (0.3)
Hardness, gpg (mg/l)	<7 (120)
Turbidity, NTU	<1
Color, °	<20
Manganese, ppm (mg/l)	0.05 (0.05)
UV Permeability, %	>75

Specifications:

Parameters	УОВ SDE-006	УОВ SDE-011	УОВ SDE-016	УОВ SDE-025	УОВ SDE-030	УОВ SDE-055	УОВ SDB-110	УОВ SDB-165
Power consumption, W	8	14	21	32	40	72	144	216
Qty of lamps, pcs.	1						2	3
Operating pressure, bar	10							
Flow, m3/h	0,1	0,2	0,4	1,4	1,8	2,7	5,5	8
Connection dimensions, Inlet/Outlet	1/4" male thread		1/2" male thread		3/4" male thread		1.0" male thread / Flange	1.5" male thread / Flange
Geometric dimensions, mm	Ø50,8 × 255		Ø63,5 × 375	Ø63,5 × 595	Ø63,5 × 914	Ø63,5 × 955	Ø108 × 965	Ø133 × 965
Item	36130	36131	36132	36133	36134	36135	36136	36137

Parameters	УОВ SDB-220	УОВ SDB-330	УОВ SDB-440	УОВ SDB-550	УОВ SDB-660	УОВ SDB-770	УОВ SDB-825
Power consumption, W	288	432	576	720	864	925	1080
Qty of lamps, pcs.	4	6	8	10	12	14	15
Operating pressure, bar	10						
Flow, m3/h	11	16	22	30	33	38	40,8
Connection dimensions, Inlet/Outlet	1.5 " male thread / Flange	2.0" male thread / Flange	3.0" male thread / Flange	4.0" male thread / Flange		5.0" male thread / Flange	6.0" male thread / Flange
Geometric dimensions, mm	Ø133 × 965	Ø168 × 965	Ø220 × 965	Ø275 × 965		Ø300 × 975	
Item	36138	36139	36140	36141	36270	36271	36142

SS AND SST

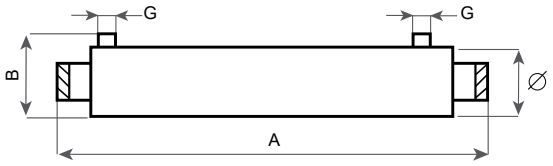
The SS and SST ultraviolet water treatment units are used in cases where it is necessary to destroy or prevent the reproduction of pathogenic microflora – to disinfect water from bacteria, viruses, mold and algae.

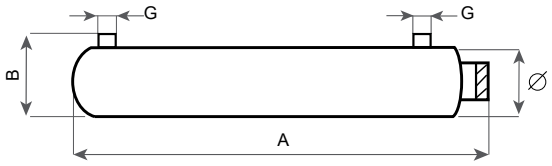
Water disinfection is widely used in the preparation of drinking water, food industry, medicine, pharmaceutical production. Local disinfection units are used at the end points of drinking water.

Specifications:

Item	Model	Power consumption, W	Quantity of lamps, pcs.	Operating pressure, bar	Flow, m3/h	Connecting dimensions
36772	УОВ SS 6w (China lamp)	6	1	10	0,1	1/4" male thread
36743	УОВ SST5 - 6w (Philips lamp)					
36773	УОВ SS 12w (China lamp)	12			0,2	
36744	УОВ SST5 - 11w (Philips lamp)	11				
36774	УОВ SS 16w (China lamp)	16			0,4	1/2" male thread
36745	УОВ SSQYT5 - 16w (Philips lamp)					
36775	УОВ SS 25w (China lamp)	25			1,4	
36746	УОВ SST8 - 25w (Philips lamp)					
36776	УОВ SS 30w (China lamp)	30			1,8	3/4" male thread
36747	УОВ SST8 - 30w (Philips lamp)					
36777	УОВ SS 55w (China lamp)	55			2,7	
36748	УОВ SST8 - 55w (Philips lamp)					
36749	УОВ SS - 110w (Philips lamp)	110	2			1" male thread / Flange
36750	УОВ SS - 165w (Philips lamp)	165	3		8,0	1/5" male thread / Flange
36751	УОВ SS - 220w (Philips lamp)	220	4		11	
36752	УОВ SS - 330w (Philips lamp)	330	6		16	2,0" male thread / Flange
36753	УОВ SS - 440w (Philips lamp)	440	8		22	3,0" male thread / Flange
36754	УОВ SS - 550w (Philips lamp)	550	10		30	4,0" male thread / Flange
36755	УОВ SS - 660w (Philips lamp)	660	12		35	

Model	Reactor dimensions, mm				Weight, kg
	A, мм	B1, мм	B2, мм	Ф, мм	
УОВ SS/SST 6W	270	63	–	50,8	1,2
УОВ SS/SST 12W	310		–		
УОВ SS/SST 16W	375	82	–	63,5	
УОВ SS/SST 25W	595		–		2,2
УОВ SS/SST 30W	910	85	–		3,6
УОВ SS/SST 55W	950		–		
УОВ SS 110W		250	270	108	11,75
УОВ SS 165W		283	305	133	15
УОВ SS 220W			380		16,3
УОВ SS 330W		380		168	36,64
УОВ SS 440W		430	470	220	53,36
УОВ SS 550W					78,8
УОВ SS 660W				273	90,0





TFC3013-400G UNIQUE HIGH-PERFORMANCE MEMBRANE

Unique high-performance membrane. Polyamide thin-film composite (TFC) membrane. With its high selectivity, it provides purification of water from all foreign impurities, including viruses and bacteria. The TFC membranes are characterized by a high degree of wear resistance and increased performance.

Specifications:

Parameters	
Concentration of NaCl solution, mg/l	500
solution pH	7,5
Pressure at the membrane, atm	3,4
Solution temperature, °C	+25
Total salt content, mg/l	max. 1500
Capacity, l / day	1500
Maximum concentration of free chlorine, mg/l	< 0,1
Temperature of water to be treated, °C	+4...+45
Maximum operating pressure, atm	21
pH range in continuous operation	3-10
pH range for chemical washing (up to 30 min)	2-11
Maximum colloidal index	5
Item	28420

MEMBRANE CHEMICAL WASHING UNITS

The washing unit consists of a tank for preparing membrane washing solutions mounted on a steel frame with wheels, a booster pump, a cartridge filter for removing suspended solids, shutoff and control valves and a set of hoses and fittings for connecting the unit to the RO-membrane unit.

Specifications:

Parameters	Units for systems up to 3.0 m³/h	Units for systems up to 9.0 m³/h	Units for systems up to 15.0 m3/h	Units for systems up to 20.0 m3/h
Rated capacity, m³/h	2–3	8–9	8–9	8 - 9
Volume of washing solution container, liter	120	300	500	750
Feed water temperature, °C	+3...+40	+3...+40	+50...+400	+50...+400
Operating pressure, atm	2–3	2–3	2–3	2 - 3
Supply voltage, V	220	220	220	220
Power consumption, kW	< 0,8 kW	< 1,5 kW	< 1,5 kW	< 1,5 kW
Unit dimensions (height × length × width), mm	1300 × 500 × 500	920 × 1000 × 740	1300 x 1000 x 1000	1850 x 1000 x 1000
Unit weight, kg	30	96	70	80
Item	20312	20329	20354	20359

MEASURING INSTRUMENTS

ROTAMETERS

Rotameters are designed to measure the volumetric flow of liquid

Parameters	FM–Z3001	FM–Z3002	FM–Z3003	FM–Z3004	FM–Z3005	FM–Z5015
Flow rate, l/min	1–7	1,8–18	8– 40	4– 60	10–100	1,8–18
Connecting dimensions, inch	1/2' '	1/2' '	3/4' '	3/4' '	1' '	1/2' '
Type	Panel mount					In–line
Accuracy, %	± 4					
Operating pressure, atm	6					
Item	23117	23111	23066	23164	23165	23402

Parameters	FM–Z5015	FM–Z5025	FM–Z5032	FM–Z5032–S–P	FM–Z4007	LZS–100D
Flow rate, l/min	3–30	4–40	5–40	10–100	75–378	300–2000
Connecting dimen-sions, inch	1/2"	3/4"	1"	1"	2"	3"
Type	In–line					
Accuracy, %	± 4					
Operating pressure, atm	6					
Item	23403	23372	23371	23334	23175	23458

CNP PUMPS

CNP pumps are manufactured in China by Nanfang, a company specializing in the design and series production of stainless steel centrifugal pumps made by stamping and welding. The company produces 200,000 pumps annually, making it a leader in China's domestic market. Products are exported to more than 50 countries (mainly Europe, North America and South Asia).

The equipment is distinguished by modern engineering solutions, professional design and careful quality control.

CDL/CDLF SERIES PUMPS

The pumps of the CDL/CDLF series are vertical, multistage, normal suction centrifugal pumps equipped with standard electric motors.

The motor output shaft is connected to the pump shaft through a coupling. The pump consists of a working stage (impeller, diffuser) installed in a cylindrical casing and connected to the base or platen and the head by means of coupling bolts. The base has inlet and outlet spigots located on the same axis. Pumps can be supplied with a control cabinet providing protection against dry run, phase mismatch and overload.

Application:

- The CDL/CDLF series pumps can be used for pumping various fluids, including water or process fluid, in a wide range of values, heads, capacities, temperatures
- The CDL model is used to pump nonaggressive liquids, while the CDLF can be used to pump weak solutions of acids and alkalis, oil solutions, alcohols, etc.
- Water supply, pumping water in water supply systems, increasing the pressure in the main pipeline, increasing the pressure in water supply systems of high-rise buildings
- Industrial pressure boosting in water supply systems for process purposes, high-pressure washing plants, fire-fighting systems.
- Supply of industrial fluid to cooling and air conditioning systems, boiler feed and condensate removal systems, tool cooling systems of machine tools (supply of cooling lubricants)
- Water treatment in reverse osmosis and ultrafiltration plants, oil refineries, separators
- Irrigation. Farmland irrigation, drip irrigation, sprinkler units

Parameters	CDL1	CDL2	CDL3	CDL4	CDL5	CDL8	CDL12	CDL16
Flow, m³/hour	1	2	3	4	5	8	12	16
Flow, l/s	0.28	0.56	0.83	1.1	1.4	2.2	3.3	4.4
Operating interval, m³/hour	0.4-2	1-3.5	1.2-4	1.5-7	3-8	5-12	7-16	8-22
Operating interval, l/s	0.11-0.56	0.28-0.97	0.33-1.1	0.42-1.9	0.83-2.2	1.4-3.3	1.9-4.4	2.2-6.1
Max. operating pressure, bar	21	23	22	21	21	21	22	22
Motor power, kW	0.37-2.2	0.37-3	0.37-3	0.37-4	0.37-5.5	0.75-7.5	1.5-11	2.2-15
Temperature range, °C	-15 ~ +120							
Efficiency, %	44	46	54	57	62	62	63	66

Parameters	CDL20	CDL32	CDL42	CDL65	CDL85	CDL120	CDL150	CDL200
Flow, m³/hour	20	32	42	65	85	120	150	200
Flow, l/s	5.6	8.9	11.7	18	24	33	41.6	55.6
Operating interval, m³/hour	10-28	16-40	25-55	30-80	50-110	60-150	80-180	100-240
Operating interval, l/s	2.8-7.8	4.4-11.1	6.9-15.3	8.3-22.2	13.8-30.5	16.7-41.7	22-50	27.8-66.7
Max. operating pressure, bar	23	29	30	22	17	16	16	16
Motor power, kW	1.1-18.5	1.5-30	3.0-45	4.0-45	5.5-45	11-75	11-75	18.5-110
Temperature range, °C	-15 ~ +120							
Efficiency, %	69	73	75	76	77	74	73	79

Motor specifications:

- Standard asynchronous motor, Hz
- Protection class: IP55
- Insulation class: F

Standard voltage:

- Single-phase version 220–230 V, 50 Hz
- Three-phase version 200-220 / 346-380 V, 220-240 / 380-415 V, 380-415 V, 50 Hz

Operating conditions:

Clean, non-explosive fluids that do not contain abrasive solid or fibrous impurities and are not corrosive to stainless steel.

Fluid temperature:

- Fluid temperature: -15 °C to +70 °C
- Hot water: up to +120 °C
- Ambient temperature: max +40 °C

Items: 35646–35654

CHL/CHLF SERIES PUMPS

CHL series pumps are horizontal, monoblock, multistage, non-self-priming, centrifugal pumps with asynchronous motor. Compact and robust design, axial inlet and radial outlet.

Application:

- In water supply systems
- In air conditioning, refrigeration, circulation systems
- Water heating
- Water purification
- Water treatment
- Irrigation
- Pressure boosting

Технические характеристики:

Parameters	CHL2–40	CDL8–40
Capacity, m³/hour	2	8
Operating interval, m³/hour	0,5–3,5	5,0–11,0
Maximum operating pressure, bar	3.9	4
Motor power, kW	0,55	1,5
Connecting dimensions	G1"	G2"
Item	35655	35656

Motor specifications:

- Fan-cooled asynchronous electric motor
- Protection class: IP55
- Insulation class: F
- Standard voltage
- Single-phase version: 220–240V, 50 Hz
- Three-phase version: 220-240V/380-415V, 50 Hz
- Maximum power of single-phase motor: 2.4 kW

Operating conditions:

- Clean, non-explosive, low-viscosity fluids that do not contain abrasive particles or fibers. Clean water, mineral water, edible vegetable oil and chemically-moderately aggressive fluids.
- The fluid to be pumped must not be corrosive to stainless steel.

Fluid temperature:

- Fluid temperature: -15 °C to +70 °C, for hot water: up to +110 °C
- Ambient air temperature: max. +40°C
- Maximum allowable pressure in the pump housing: 1.0 MPa (10 bar)

METERING EQUIPMENT

The principle of operation of the metering pump is as follows: A Teflon membrane is attached to the piston (plunger), which is actuated by the constant electromagnetic field of the solenoid. When the piston moves forward (electromagnetically), pressure is applied to the pump head and fluid is ejected through the dump valve. After the end of the electromagnetic field, the piston returns to its initial position by means of a spring, with automatic fluid intake through the intake valve.

The pump does not require lubrication, which reduces the maintenance process to virtually zero.

The materials used to manufacture the pumps make it possible to dispense aggressive fluids.

ETATRON DLX MEMBRANE PUMPS

DLX pumps are microprocessor-controlled solenoid digital proportional metering pumps. The pumps are made in an anti-acid design, the control panel is protected from UV radiation by a film. The standard height of the reagent intake is 2 meters.

Head material – polypropylene; membrane – Teflon; membrane gaskets, valves and fixing valves made of Viton. Wall mounting. Protection class: IP65. Dimensions: 190x120x150 mm. The maximum frequency is 120 cycles per minute. Digital LED display.

Parameters	01–15	02–10	05–07
Capacity, l/hour	1	2	5
Back pressure, atm	15	10	7
Pulse volume, ml	0,14	0,28	0,69
Power consumption, W		37	
Item	36031	36030	36039

SEKO KOMPACT DPT 200 DIGITAL SOLENOID METERING PUMP

SEKO KOMPACT ARE VERSATILE AND RELIABLE MICROPROCESSOR-CONTROLLED DIGITAL SOLENOID METERING PUMPS. THE PUMPS' PERFORMANCE AND RELIABILITY PROVIDE A SOLUTION TO ALMOST ANY DISPENSING PROBLEM YOU MAY ENCOUNTER.

- Dosing mode – constant, proportional: by 4-20 mA signal or from a water meter pulse signal
- Digital interface
- Level control - the possibility of connecting a level sensor
- Material of the hydraulic part - PVDF
- Timed dosing with weekly programmable timer

Item	Model	Hydraulic section	Capacity (l/h)	Pressure (bar)	Connection (input/output)	Frequency (cycle/min)
36075	DPT	200	5 (2)	8 (10)	4/6	160

FLOWMETERS

Proportional dosing pumps are controlled by a digital signal from a pulse flowmeter. The pulse flowmeter measures the volume of water and sends control signals (pulses) to the dosing unit after a certain volume has passed. The flowmeter parts are made of chemically resistant materials, so it can be used in a variety of liquid supply systems. Flowmeters are available for both cold water (up to +30 ° C) and hot water (up to +90 ° C), the maximum working pressure – up to 16 atm.

THREADED IMPULSE FLOWMETERS

Diameter, DN	15	20	25	32	40	50
Rated flow rate, m³/h	1,5	2,5	3,5	6	10	15
Maximum flow rate, m³/h	3	5	7	12	20	30
Pulse value, liters/minute	1; 10			10	100	

FLANGED IMPULSE FLOWMETERS

Diameter, DN	50	65	80	100	150	200
Rated flow rate, m³/h	50	65	120	230	400	750
Maximum flow rate, m³/h	90	120	200	300	600	1000
Pulse value, liters/minute	100				1000	

SOLENOID VALVES

The solenoid valve is designed to work as a shut-off two-position device for remote control of media flow in pipelines. The valve is controlled by applying voltage to the coil.

Specifications:

Parameters	2W–025–08	2W–160–15	2W–200–20	2W–250–25	2W–350–35	2W–400–40	2W–500–50
Connecting dimensions, inch	1/4	1/2	3/4	1	1 ½	1 ½	2
Operation concept	Direct action	Indirect action					
Flow capacity, m³/h	0,23	4,8	7,6	12	24	29	48
Operating pressure, atm	Normally closed: 0–10, Normally open: 0–6						
Power	AC:220-230V/50-60Hz, AC:110-120V/50-60Hz, DC:24V, 12V						
Item	34648 34649	34650 34651	34652 34653	34654 34655	35067 35070	35071 35072	35068 35069

GEYSER D.O.O.
Južni Bulevar, 136, Beograd, Serbia
+(381) 117442077
+(381) 692221940

GEYSER BALTIJA SIA
Salamandras 1, Rīga, Lv-1024, Latvija
+(371) 67565300

GEYSER FILTERS SRL
Șos. Morarilor nr.1, camera 140,
cladirea C7, or. București, România,
+40 (725) 967611

SUV FILTRI LLC
Shaykhantakhur district, Takhtapul street 12,
Uzbekistan, Tashkent
+998-91-774-87-90

TOD GEYZER KAZAKHSTAN
Rayimbek Ave. 221/2, Almaty, Kazakhstan
+7 (727) 313-29-68

office@geyser.pro
geyser.pro